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ORIGINAL COMMUNICATIONS.

ARTICLE I.

REPORT OF THIRTEEN CASES OF UNUNITED FRACTURE, TREATED BY SUB-CUTANEOUS PERFORATION OF THE BONE.

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In the spring of 1854, I had the honor of submitting to the American Medical Association an essay on the treatment of false joint and delayed union of fracture by a new method. The committee of the association awarded the annual prize to this essay. It contained, besides the experiments and reasoning on which the method is based, a report of cases treated by the method proposed.

Since the publication of that essay, a more extended experience has enabled me to form a more just appreciation of the value of the treatment proposed, to ascertain its advantages and defects, and to suggest some improvements in the manner of its performance. I think it due to the profession, as well as to myself, that the results of this practice should be fully and fairly laid before the public. It will be seen by the result of

the cases herein detailed, that the views formerly expressed concerning the efficacy and safety of the operation are in the main confirmed. It may be noticed, also, that in those cases in which this operation did not succeed, others more severe also failed.

As was to be expected, several surgeons discovered that this operation was not new; that they had themselves performed it with bistouries, gimlets and other instruments quite incapable of being made to penetrate sound bone; and they have accompanied the publication of their claims to priority with comments more or less unjust.

For this reason, I hope to be pardoned for repeating here what was written in the preface of my first publication on the subject, page 8: "When I speak of novelty, let no one impute to me the pretension to have been the first to attempt to institute a similar treatment. On the contrary, I recognize with pride that many surgeons have before me attempted the same object." Among these I cited at different times: Sir Charles Bell, who suggested but did not perform it; Blandin, who used a bistoury, and whose patient is said to have died of hemorrhage; Guerin, who has done so much for sub-cutaneous surgery, and who filed the ends of the bones; Sanford, of Iowa, who came nearer to my method than any other surgeon, and Miller. Of all these attempts I was in ignorance when I first performed my operation, but became aware of them before making my experiments public. The profession was equally in ignorance of them. At the present time, not one of these methods is, as far as I can learn, resorted to. It is, therefore, not too much to claim, that the instrument, the method of using it, and the principle upon which it acts, are of my own discovery.

I. UNUNITED FRACTURE OF THE HUMERUS.

Four of the cases which have fallen under my care were ununited fractures of the humerus. As these are among the most intractable of all, they are therefore the severest tests of the value of any method of treatment.

CASE 1. Ununited fracture of the humerus, of four months' standing. Two perforations of the bone. Cure in one month.

P. P., a mechanic, of good constitution, aged thirty years, received, October 3d, 1856, an oblique fracture of the humerus, immediately below the attachment of the tendon of the pectoralis major muscle. The injury was severe, and although the fracture was not compound, there was great contusion of the member, and a wound existed behind the olecranon process which extended to the bone. Dressing performed with great care in the usual manner, a pad being placed between the arm and thorax.

Everything progressed favorably, and, at the end of three weeks, the wound of the elbow was cicatrized, and considerable firmness in the fracture, which was in perfect apposition. At this time, the patient, who was a carpenter, and employed as a watchman about a building, fell about six feet, breaking up all adhesion, and displacing the fragments. The dressings were readjusted, and at the end of about four weeks more, the union had taken place. At this time, he received another injury, refracturing the bones and displacing the fragments.

From this time, there was no tendency to union; the upper fragments projected, and although the arm by careful measurement was one-eighth of an inch longer than the other, the apposition of the fragments was with difficulty and somewhat imperfectly maintained.

The treatment was, however, persevered in until 13th Feb., 1856, over four months after the first accident, when, as there was no tendency to union, Drs. N. S. Davis, W. B. Herrick, J. W. Freer and C. Duck, were asked to give their advice in the case. They recommended the sub-cutaneous perforation of the bone, which was done in their presence, in the following manner:

With a medium-sized perforator I penetrated and traversed the fragments in three different directions, viz: horizontally, obliquely upwards and obliquely downwards. The dressings were applied with great care.

Feb. 23d. Dressings removed, and there being no tenderness at the seat of fracture, the operation was repeated with a larger-sized instrument, and the wounding of the adjacent surfaces of the fracture effected more extensively. The dressing was reapplied with great care. On the 30th, union was found to have taken place.

Case 2. Ununited fracture of the humerus, of eight months' standing. Four operations by perforation.

H. C. P., aged twenty-nine years, of good constitution, a resident of Nebraska Territory, received, in Sept., 1855, a gun-shot wound from a large musket ball, which fractured and extensively comminuted the left humerus about the middle, lacerating the soft parts extensively. The ball entered the fore part of the arm, and passed out behind. The swelling and tenderness were such, that splints were at first very imperfectly applied. Several abscesses formed about the point of fracture and as high up as the shoulder, and fragments of bone were discharged from time to time.

He presented himself to me, April 16th, 1856, more than seven months after the accident. There was no tendency to union. A fistulous opening existed at the point of entrance of the ball, from which healthy pus was discharged. On passing a probe through this opening, numerous fragments of bone were met with, lying between the fractured extremities.

Having enlarged this opening with the bistoury, I removed four of the fragments. They were of large size, and composed of the compact structure of the bone. Two of them were each over an inch in length. The usual dressing, composed of four splints of wood, were then applied, and continued with care for eight weeks. At the end of this time, the wound had cicatrized, but there was no tendency to union. The loss of bony substance was in this case so great, that there was no overlapping, but the extremities of the fragments were rounded and lay nearly in contact with each other.

June 1*st*, 1857. I passed down upon the point of fracture a large sized perforator, and directing it first upward, penetrated the upper fragment deeply at two different points, then separated, by scratching, its fibrous covering. This treatment was repeated upon the lower fragment without withdrawing the instrument, but directing its point downward. It was then withdrawn, a piece of adhesive plaster applied on the point of puncture, and the splint and bandages reapplied as before.

This operation was repeated three times, at intervals of ten days. After the second puncture, a commencement of union was

perceptible, and he left, August 31, 1856, to attend to some business at a distance. At this time, the arm was examined by Dr. J. C. Morfit and others, and union found far advanced.

Since writing the above, I have learned that the patient went under the care of another surgeon, and had a seton inserted without benefit.

CASE 3. Ununited fracture of the humerus, of six months' standing. Five operations by perforation. Cure in six weeks.

C. N., aged twenty-four years, a young man of good health, received, June 2d, 1855, a simple fracture of the lower third of the right humerus, by a fall from a carriage. He states that it was dressed with pasteboard splints only four inches in length confined by a roller. This treatment was continued about three months, after which it was left entirely without dressing.

Dec. 12*th*, 1855. The fracture could be distinctly felt to be very oblique, but not much overlapped. The bone bent freely in every direction, but the fractured surfaces did not glide upon each other. I perforated the extremities of the fragments in two different directions where they overlapped, and applied the splints of wood as usual. This treatment was repeated four times, at intervals of one week. On removing the dressings, Jan. 28th, 1856, union was found to have taken place. The splints were, however, continued a week longer, when they were removed.

CASE 4. Ununited fracture of the humerus, of five months' standing. Treatment for five weeks by six perforations. Use of seton and resection without benefit.

Patrick Gavin, of Waukegan, Ill., received, Nov. 20th, 1856, a simple fracture of the left humerus, below the middle, and at the same time a fracture of the left tibia.

The latter fracture united at the usual time, but the former, Feb. 26th, 1857, showed no tendency to union. The tissues of the arm were flabby, and the ends of the fragments glided freely in any direction.

Perforated the ends of the fragments freely, and applied splints, with the forearm extended, this being the only position in which immobility could be preserved.

March 10*th*. Removed splints, and repeated the operation.

March 25th. Repeated the operation; much less mobility.

April 5th. Repeated operation; considerable firmness.

April 13th. Repeated operation; movements very slight.

Aug. 6th. A seton was placed between the ends of the fractured bone this morning. The seton consisted of four threads of cotton.

Aug. 7th. Some pain and swelling.

Aug. 8th. Suppuration commenced around the seton.

Aug. 11th. The seton was removed to-day. The patient has suffered much pain and swelling from its introduction. The inflammation is very severe. Splints were carefully applied, and continued for four months. Fistulous openings remained for two months. No tendency to union.

Feb. 6th, 1858. A vertical incision having been made down to the ends of the bone, they were removed to the extent of one-fourth of an inch from each extremity. A dressing was applied, consisting of splints placed one upon the internal, anterior and posterior sides of the arm with rollers. The wound was filled with lint, in order that it might heal from the bottom.

Feb. 7th. Very severe symptoms, both local and constitutional, followed the operation. The arm was much swollen and very painful. The patient was affected with nausea and vomiting. The dressing upon the arm was loosened and an evaporating lotion applied. Quiniæ sulph. and morphiæ sulph. were administered internally, together with broths.

Feb. 8th. Patient somewhat better this morning. Continued same treatment.

Feb. 10th. Patient better. The swelling in the arm having somewhat subsided, the dressing was removed and carefully reapplied. The wound has commenced to suppurate. An opening was left in the dressing so that the wound might be dressed each day.

Feb. 16th. The dressing was removed this morning; wound granulating; no tendency to union.

Feb. 20th. Arm examined; no tendency to union.

March 1st. The wound made in the arm has healed. The fracture still movable. Four splints were applied this morning, one upon each side of the arm, extending from the shoulder to the elbow, with a starch bandage.

March 15*th*. Dressing removed; no union. Dressing carefully reapplied.

April 10*th*. Arm examined again this morning; no *union*.

May 10*th*. Two sheet-iron splints made to fit the arm were applied, which the patient still wears, no union having taken place.

II. FIVE CASES OF UNUNITED FRACTURE OF THE FEMUR.

Case 5. Ununited fracture of the right femur of five months standing. Treatment by eleven perforations during five months. Cure.

Frederick Gaylord, of Wisconsin, aged thirty-five years, of delicate health, received, January 17th, 1855, an oblique compound fracture of the right femur, a little above the middle. This, according to his account, was dressed by the application of short wooden splints around the thigh, secured by many turns of a roller applied very tightly. No extension was used, and no roller upon the leg. This treatment was continued for five weeks. When the splints were taken off, there was great excoriation of the knee from pressure. Œdema of the leg and foot. The opening in the skin was healed.

He entered the hospital of the "Sisters of Mercy," at Chicago, April 25th, 1855, under the care of Dr. Johnson, the surgeon in attendance at that time.

June 1*st*, 1855. Came under my care. The member was found shortened about two and a half inches, notwithstanding Dr. Johnson had applied suitable splints with extension and counter-extension. The whole member œdematous. Cicatrices about the knee, and one on the anterior part of the thigh, from the protrusion of the upper fragment lying in front of the lower, and much overlapped. No commencement of union, but free gliding and bending. Patient's health poor, emaciation, pallor of the surface, no appetite.

I dressed the member with much care in the straight position, using the dressing of Dessault, perforating the bone from before backwards in three different directions. Directed a nourishing diet.

In boring the bones, it was noticed that when the perforator

had passed through one fragment, it slipped about a quarter of an inch before touching the other.

June 13th. Repeated the same operation at a different point. Fragments seemed half an inch apart at the point perforated.

June 24th. Repeated the operation.

June 29th. Repeated the operation. Inadvertently, the puncture was made on the cicatrix, and four days afterwards it was found that an abscess had formed at that point. This was opened, and as the pus was serous, the cavity was washed out with sul. copper, four grains to the ounce of water.

July 27th. Abscess quite healed.

Aug. 24th. In order to avoid the vicinity of the abscess, the perforation was made from the outside of the thigh; the instrument then passed between the fragments, which seemed not to touch each other at any point. Denudation of the surfaces was effected to as great an extent as possible.

At this time, I first learned that the patient had been in the habit of discharging with the urine a large quantity of phosphatic gravel; nitro-muriatic acid was prescribed.

Sept. 8th. Repeated perforation from the outside in the same manner.

Sept. 28th. Perforated from the anterior surface.

Oct. 18th. Repeated last operation.

Nov. 3d. I used a larger sized perforator, and pressed it five times through the bone without withdrawing it from the skin. Space between the bones evidently becoming filled with more solid substance. This was the last operation. There was much firmness.

Dec. 18th. Removed all the dressings; union perfect.

This case presented such a combination of unfavorable circumstances as to render it one of the most difficult I have met with.

I saw Mr. Gaylord, in Jan., 1858, in good health, with a good and useful limb.

CASE 6. Ununited fracture of the femur, of four months' standing. Four operations. Cure in six weeks.

Peter Mullen, aged fifty-six years, entered the Mercy Hospital for a simple oblique fracture of the right femur. It was

dressed in the usual manner. Soon after, he fell into a severe paroxysm of epilepsy, which continued over an hour, and displaced the dressings. These were readjusted without delay, but an attack of typhoid fever supervened, which lasted about four weeks. He then convalesced slowly.

At the end of sixteen weeks, there was not the slightest commencement of union. At this time, Oct. 20th, 1854, I perforated the extremities of the fragments and reapplied the dressings.

Oct. 29th. Repeated the operation, using a large sized instrument, and passing it in laterally.

Nov. 10th. Repeated the operation; considerable firmness.

Nov. 18th. Repeated perforation; union greatly advanced; tenderness at the seat of fracture.

Dec. 1st. Union perfect.

CASE 7. Ununited fracture of the femur, of four months' standing. Cure by four perforations.

A healthy young man entered the Mercy Hospital in July, 1854, with a simple fracture of the left femur. I have not been able to obtain the notes of this case, which was under the care of Dr. Johnson, one of the surgeons of the Hospital. He came under my care in October, when I found he was being treated by my method. After four months of treatment by the straight apparatus of the Hospital, during which there was no union, Dr. Johnson bored the bones at three different times, and, Nov. 1st, there was considerable firmness, which increased till perfect union was effected.

CASE 8. Ununited fracture of the femur, of five months' standing. Cure in four weeks by one operation.

Daniel Sullivan, aged thirty-six years, a laborer, of good constitution, placed himself under treatment for an ununited fracture of the left femur, at the junction of the upper with the middle third, June 19th, 1858.

History.—Five months previous, viz: on the 26th day of January, 1858, he was thrown suddenly and violently from the railroad track, together with a hand-car upon which he was riding at the time, down an embankment, and by the fall received a fracture of the femur, besides several other bruises upon

different parts of his body. The limb was dressed in the straight position, and allowed to remain thirteen weeks, when the dressing was removed, the attending surgeons supposing the fracture had united. In one week after the removal of the splints, the member was examined, and the fracture found to be movable. The patient at this time came under the care of Drs. White and Lake of Iowa City, who applied a starch bandage, and allowed it to remain five weeks, when it was removed. The fracture was still ununited. The limb was then dressed in the straight position, and allowed to remain two weeks, when he came to Chicago by railroad, a distance of over two hundred miles.

Present State.—The fractured extremities move readily upon each other. Quite a degree of angularity exists outwardly, with one and a half inches shortening. The muscles of the limb are somewhat atrophied. The patient is in good health.

Treatment.—June 20th, 1858. A perforator was passed in three different directions between and through the ends of the bone, and the limb was dressed with Dessault's splint. The patient was directed to keep as quiet as possible.

June 22d. The patient complains of some soreness in the part. Says it is a "burning pain."

June 27th. The splint was removed, and the limb examined; a good degree of firmness perceptible. Still complains of some pain, especially upon pressure or motion. Splint reapplied.

July 4th. The limb examined again this morning; improvement very perceptible since the last examination.

July 11th. Improvement still going on.

July 18th. The limb was examined; found to be united. The dressing has not been removed as yet, in order to guard against accident.

July 31st. Dressings removed; consolidation perfect.

III. THREE CASES OF UNUNITED FRACTURE OF THE TIBIA.

All experience bears testimony to the greater facility of treating fractures of the tibia and fibula, and of the radius and ulna, by ordinary means, than of the femur and humerus; yet, while these latter may be considered the severest tests of any method of treatment, the former are not without great importance, and

have peculiarities which render it necessary to study them in detail.

Case 9. Ununited fracture of the tibia, of four months' standing. Cured in two weeks by one perforation.

—— Casey, a laborer, entered the Mercy Hospital about the end of August, 1858, for an ununited fracture of the left tibia, of over four months' standing. He had been under the care of Dr. Charles Duck, and seemed to have been treated with great caution and skill, as the apposition was perfect and the movements but slight. As both the Doctor and the patient himself were decidedly of the opinion that the union was less firm than it had been a month previously, I passed a perforator in three different directions through the ends of the bones, and applied a carved splint with a foot-piece. At the end of two weeks the consolidation was perfect.

Although the slight movements which existed in this case, and the rapidity of the union, favor the supposition that it might have occurred without any operation, yet, considering the good treatment which it had received, and that the firmness was less than it had been, there seems no probability that it could have occurred without very great delay.

Case 10. Ununited fracture of the tibia, of five months' standing. Cured in five weeks by four perforations.

D. B. French, of Wisconsin, received, May 9, 1856, a double comminuted fracture of both bones of the leg. He was twenty-five years of age, and of good constitution. The upper fracture was seated four inches below the knee, and the lower four inches above the tarso-metatarsal articulation. The fracture had been extremely well adjusted immediately after its occurrence, and a union obtained of both bones at the upper fracture and of the fibula below. The tibia, however, did not unite at that point, notwithstanding the care bestowed upon him by Dr. Gordon, under whose treatment he was at the time.

Oct. 20th. More than five months after the accident, he came under my care. A perforator was passed in three different directions through and between the ends of the fragments; a carved wooden splint with a foot-piece was applied to the back part of the leg, and carefully secured by a roller.

Oct. 29th. Bored the ends of the bones and passed the instrument freely between them.

Nov. 5th. Repeated operation; considerable tenderness.

Nov. 25th. Removed dressings; consolidation complete.

CASE 11. Ununited fracture of the tibia, of seven months' standing. Cured in four weeks by four perforations.

Edwin Porter, of Wisconsin, aged twenty-one years, of good constitution, received, August 13th, 1856, a simple fracture of both bones of the right leg, a little above the middle. It appears to have been well adjusted, but, March 31st, 1857, the tibia was still ununited. The treatment was in every respect the same as in the preceding case, and in four weeks, no movements were perceptible.

IV. TWO CASES OF UNUNITED FRACTURE OF THE ULNA.

CASE 12. Ununited fracture of the ulna, of over three months' standing. Two perforations; cure in twenty-two days.

Patrick Madden, a laborer, was admitted into the Mercy Hospital, April 3d, 1854, on account of very extensive wounds received from pieces of rock, projected by the explosion of a blast. This case came under my care, May 10th succeeding. The laceration of the soft parts had prevented the coaptation of the fracture; the upper fragment projected beneath the skin, and did not touch the other. I applied splints in such a manner as to press the upper piece into its place, and retained them for nineteen days. Finding at the end of that time that there was no commencement of union, and that the pressure of the splints was painful, I perforated the bones transversely, May 27th, near twelve weeks after the fracture. Dressings replaced.

June 8th. Repeated the puncture, perforating the bone in three different directions.

June 18th. Removed the dressings; union perfect.

CASE 13. Ununited fracture of the ulna, of eighteen weeks' standing. Two perforations. Cure in four weeks.

P. M., aged thirty-five years, received, May 16th, 1854, a fracture of the left ulna, with dislocation of the radius forward.

The fracture had been produced by a blow of a piece of wood, and extended into the sigmoid cavity and downward about two inches.

The subject of this accident was a drunkard of the lowest class, and the injury was not treated in any manner for about four weeks. At the end of that time, an angular splint was applied on the foreside of the member, and the bones pressed somewhat into their places, and roller applied. This treatment was continued for five weeks, and union seemed to have taken place, when the patient fell and reproduced the fracture.

He was then without any treatment until Oct. 1st, 1854. At that time there was no union. The lower fragment was not in contact with the upper, and the head of the radius was partly removed from the articular surface of the humerus.

At this date, I perforated the fragments repeatedly with the small sized instrument, and applied angular splints on the palmar surface of the member.

Considerable tenderness resulted from this operation, and some swelling.

Oct. 12th. The tenderness and swelling having subsided, repeated the operation.

Oct. 28th. Removed the dressing; union seemed perfect.

Nov. 15th. No movements perceptible at the point of fracture.

Reflections.—It will be noticed that in all the above cases no serious accident occurred. In one, a small abscess, and in another, a subject of bad constitution, some swelling, resembling erysipelas, which, however, soon subsided. These were the most serious results of about sixty perforations. We may therefore assert, with great certainty, that this operation, unless performed upon patients in a condition unfit for any operation, is entirely safe.

It will also be noticed, that, while in cases of fracture of the tibia, where apposition is perfect and the movement slight, a single perforation speedily induced union in a few days; on the other hand, fractures of the humerus and of the femur did not, in most cases, require less than four operations, nor unite in less than four weeks, while one required five months and eleven perforations to effect a cure, and another did not unite at all.

My practice at present is to commence the treatment by two or three perforations of the bone through a single opening of

the skin, using an instrument of small size, repeating this every ten days or two weeks, gradually increasing the size of the instrument and the extent of the wound of the bone, until tenderness and some swelling are induced. I have very uniformly found that when pain and throbbing are felt in the seat of fracture, union has commenced.

Direction of the Perforator.—That point and direction of puncture should be chosen which affords the easiest access to the bony surfaces with least exposure of vessels. In many cases of oblique fracture, traversing the bones answers well. In others, as of the tibia, I have found that following the direction of fracture is best. In others, still, when the ends are not perfectly in contact, I make a perforation between, and direct the instrument first in one direction, then in the other; while in others, still, the instrument can be passed most readily between the bones and attack them at the side.

Size of the Instrument.—In cases of ununited fracture of the tibia, or radius and ulna, where the ends are in contact and the wounds slight, I use a perforator no more than two or three *millimetres* in breadth; while, in old cases, situated in the femur and humerus, and when there is great mobility, it is as well to use an instrument one-eighth of an inch and over in breadth. In such cases, very extensive wounding and perfect denudation is required. It was not found that the bones had in any case lost their natural feeling of density.

Causes of Want of Union.—In all the above cases, the causes of non-union were imperfect apposition, or a dressing admitting of too great mobility, or accidents producing displacements, or indocility of the patient. In three of the cases, the fragments were separated from each other by a sensible space, as shown by the instrument in perforating them. It is especially to be noticed, that the most efficient means for securing immobility were in every case conjoined with the treatment by perforation. These means were such as are generally known and used:

ARTICLE II.

RESECTION OF TWO AND A HALF INCHES OF THE LOWER END OF THE OS HUMERI, THE SAME EXTENT OF THE UPPER END OF THE RADIUS, AND NEARLY ALL THE ULNA. RECOVERY, WITH A USEFUL MEMBER.

BY DANIEL BRAINARD, M.D.,
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Owen Anderson, aged twenty-six years, Norwegian, a strong, muscular man, consulted me, May 25th, 1857, for a scrofulous disease of the right elbow joint.

Present State.—The arm is wasted, and fixed in nearly a straight position; the elbow is greatly enlarged, tender to the touch, and incapable of being moved in any degree, the attempt causing great suffering; the integument about the joint is stretched and shining; the veins are enlarged and filled with dark blood. There are two fistulous openings on the ulnar side of the arm, both communicating with the joint, from which a sero-purulent fluid is constantly discharged. The patient is unable to supinate or pronate the hand. Flexion and extension of the wrist and fingers can be performed only in an imperfect manner, The ulna is enlarged throughout nearly its whole length.

History.—The patient states that two years ago he sprained his right elbow joint by having it caught in the machinery of a saw mill. A good deal of swelling and pain followed the injury. These gradually subsided under the application of evaporating lotions, fomentation, etc., so that the patient was able to return to his employment at the end of three weeks; the joint, however, remained tender and painful, especially at night, for two years, the patient in the meantime following his usual occupation, that of a sawyer. At the end of this time, the joint became suddenly very painful and much swollen, so that he was compelled to leave his work and confine himself to his room. Suppuration soon commenced about the joint, and openings were formed; there was loss of appetite and chills. Very little treatment was used during this time, and the patient continued to get worse, the joint all the time enlarging, and being more or less painful up to the present time.

Operation, May 26th.—The patient having been placed fully under the influence of chloroform, a transverse incision was carried across the back of the articulation, immediately above the olecranon, from the ulnar nerve to the external condyle, and two longitudinal incisions through the extremities of the transverse, so that the incision altogether had the form of the letter H. The flaps thus formed having been dissected freely back, so as to expose the joint, the olecranon was first removed with the saw; then the internal lateral ligament was divided, and the ulnar nerve pushed over the internal condyle, and two inches of the head of the humerus was removed with the saw; and, lastly, the ends of the radius and ulna were also removed to the extent of two and a half inches. No vessels required ligation. The incisions were closed with the interrupted suture, and water dressings applied, and the arm placed in a flexed position in a trough-like tin splint; one quarter of a grain of morphia was administered, and the patient placed in bed.

Everything went on favorably, the arm being dressed at intervals of two days, with pads of dry lint and a figure of eight bandage, as at the time of the operation, the stitches being removed as they became loose by ulceration, and strips of adhesive plaster substituted till union had become perfect.

On the 28th of June, little more than four weeks after the operation, the elbow was entirely healed. At that time, the arm could be bent and extended nearly to the full extent, and passive pronation and supination were almost perfect.

July 25th. Patient called at the office this morning; is able to bend and extend the forearm two-thirds of the limits by voluntary motion, and had very considerable power of supination and pronation. The arm is still gaining strength, and within the last few days he has been able to carry a pail of water in that hand. There still remained, however, a fistulous opening at the point where the ulna had been divided, and the enlargement of this bone was so great as to determine me to remove it.

Accordingly, August 12th, the operation was performed. An incision having been carried along its superficial surface to within three inches of the wrist, and down to the bone, a blunt instrument was insinuated between the bone and periosteum,

and pressed backward and forward so as to separate their attachments. This was very readily done, and the ulna sawn across three inches above the wrist, where it was quite sound. This wound healed readily, and, Aug. 24th, there was only one small opening.

July 25th, 1858.—This patient paid me a visit. The wound has been perfectly healed for many months, and his health good. The forearm seems shortened to about half its former length. The upper end of the radius rests across the lower end of the humerus. Flexion and extension, to the extent of fifty degrees, are readily performed; rotation, and even lateral movements, to some extent, are also effected. The muscles of the member are well developed, and the patient has been receiving fair wages as a laboring man, and uses the member for feeding and dressing himself very readily.

The accompanying figure correctly represents the appearance of the member at the present time.

Remarks.—Since resection of the elbow joint was first proposed by Park in 1780, the operation has been performed so often as to have ceased to attract peculiar attention.

Cases are on record by hundreds, and notwithstanding occasional unfavorable results, the safety and utility of the operation are at the present time well established.

The great majority of these operations, however, only embraced the articular surfaces and extremities of a part or of all

the bones concerned in the elbow joint. It is but recently that surgeons have thought of removing the whole or the greater part of one of the bones of the forearm. Professor Carnochan has reported a case of removal of the entire ulna, and another of the radius, in both of which a useful member is stated to have been preserved. But from one case which has fallen under my observation, where the ulna had been removed entire, it might be inferred that amputation of the member would have been preferable.

Had I proposed in the first instance the removal of as much bone as was eventually taken out in this case, I should have advised amputation. The result, however, is a member not only useful but invaluable.

There is one point of interest in a physiological point of view, which must not be overlooked. It is the separation of the bone from the periosteum, in such a manner as to leave this membrane behind almost entire. This was done under the belief that the bone might be to some extent regenerated. The examples of necrosis of the phalanges of the fingers, and of the shaft of the long bones where new bone is formed, and the old eliminated or removed by operation, are familiar to all.

In this case, no part of the ulna has been regenerated. What is the reason? Had the whole shaft of the bone died, we know from ample observation that new bone would have been formed.

I have long ago had occasion to show that the function of the periosteum in forming and in regenerating bone is less considerable and not so well established as has been believed.*

I pointed out the sources of error in this respect, in the experiments of men so distinguished as Hunter, Duhamel and Fleurens. At present, I only call attention to the fact that isolating a long bone from its periosteum and removing it, leaving the periosteum behind entire (an operation which can, in some cases of disease of the bone, be readily performed), does not necessarily lead to a regeneration of bone.

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*Essay on the Treatment of Ununited Fractures and Certain Deformities of the Osseous System. Paris, 1853.

ARTICLE III.

TWO CASES OF HEPATIC ABSCESS, TREATED IN THE MERCY HOSPITAL BY W. H. BYFORD, M.D.

REPORTED BY E. O. F. ROLER, RESIDENT PHYSICIAN.

Michael F——, aged twenty-four, a native of Louxemburg, Germany, a tailor by trade and of temperate habits, admitted into the medical wards of Mercy Hospital, April 12th, 1858. Has never been of a robust constitution, and has a strumous appearance; but, with the exception of one or two attacks of ague, has always been exempt from any special disease.

History.—The first symptoms of his present illness made their appearance about ten weeks previous to his admission. A dull, aching pain was felt in the right hypochondrium, which rapidly increased in intensity, and was accompanied with febrile action of a high grade, pain in the right and left shoulder, hurried breathing, short, dry cough, inability to lie on either side, with nausea and frequent efforts at vomiting. Says his alvine evacuations have been of a "whitish color" from the beginning of his disorder. The general symptoms subsided after eight or ten days, but the pain and sense of tension in the right side continued to harrass and weaken the patient up to the time of admission.

Present Appearance and Symptoms.—Patient considerably emaciated; countenance dull and apathetic; skin and conjunctiva of eyes of a deeply jaundiced hue; tongue moist, and coated with a dark yellow fur; pulse small, compressible and frequent; bowels torpid, moving only when acted upon by purgatives. On examination, a well defined tumor is found to exist in the right hypochondrium, extending across the epigastrium and into the umbilical and right lumbar regions. An obscure outline of the right lobe of the liver can be traced along its boundary in the abdomen, and the whole surface seems slightly indurated and exceedingly tender on pressure. The tumor, externally, has a tense and glistening appearance, but there is no discoloration of the surface nor any of the characteristic signs of inflammation in the underlying textures. No

fluctuation perceptible; the extreme tenderness, however, prevents a satisfactory examination. Patient thinks he has had nothing like rigors, but has sweat freely at times during the last week or ten days, with evening exacerbations of fever.

Diagnosis.—Acute inflammation of the liver, resulting in suppurative abscess.

Treatment.—A poultice of ground flaxseed applied over the swelling; internally, hyd. sub. mur. gr. iij., divided into four powders, and given every four hours until the whole are taken; afterwards mag. sulph. q. s. to move bowels freely.

April 13th. Had two copious clay-colored evacuations during the night; restless and complains of inability to sleep, and a sensation of *tearing* when attempting to lie on either side. Appetite greatly impaired; thirst moderate; pulse this morning 104; has been sweating freely since three o'clock a. m. Ordered tr. cinch. ʒj. every six hours, to which add, at the time of taking, ac. sulph. ar. gtt. xv., and an opiate at night to procure rest.

April 14th. Late last night patient began to complain of sharp pains over the whole abdominal region; his pulse became thread-like and 148 per minute. He described them as "cutting pains," and most severe in the vicinity of the tumor, and radiating from it as a centre. Fomentations were applied, and morph. gr. ½ was given at intervals, until the severity of the symptoms subsided.

11 *a. m.* Is yet suffering some pain; abdomen swollen, tense and painful on slightest pressure; pulse 124; breathing 35; position dorsal, knees drawn up.

Dr. B. remarked to the class present that the symptoms evidently indicated a change in the condition of the patient since the last examination. There are three different ways in which an hepatic abscess may terminate, all of which *usually* prove fatal.

1*st.* From contiguity of surfaces, there may be an inflammatory adhesion between the peritoneal coverings of the liver and abdomen, and the contents of the abscess find an exit externally.

2*d.* By the same process, it may find its way into some of

the thoracic or abdominal viscera, as the lungs, stomach and transverse colon.

3*d*. There may be an effusion into some of the serous cavities, as the pleura, the pericardium, or more frequently the peritoneum.

In the majority of cases, the first and second modes of termination prove fatal, and in the event of the last taking place, death would almost inevitably follow. Had any one of these results transpired in the case before us? To a certain extent the diagnosis was easy. Peritoneal inflammation of a moderately severe grade evidently existed, but was it of sufficient intensity to demonstrate the presence of an irritating fluid of any kind in the abdominal cavity? He remarked that an important fact was to be remembered during the suppurative process of an abscess, especially of that character. The breaking down of the textures and their solution were always preceded by a certain degree of inflammatory action, forming the *adhesive* stage in its progress through the part. Contiguous parts and organs would thus become agglutinated during this transition stage, and immediate effusion prevented. When this inflammatory action involved serous structures, the constitutional and local symptoms were always more or less aggravated. Might it not be of that character in the case before them? Might not an inflammatory adhesive action be going on between the peritoneal covering of liver and abdomen, and a consequent increase in the intensity of the symptoms? He was inclined to this opinion from two circumstances.

1*st*. There was no perceptible subsidence of the tumor, which ought to take place in the event of a discharge of the pus into the peritoneal cavity.

2*d*. The symptoms were not of as severe a grade as should be expected, and which would most likely occur under those circumstances.

Yet no positive diagnosis could be given then as to which of the two conditions did exist. In a very short time, however, there would be satisfactory evidences.

The previous treatment to be continued, with the addition of morph. gr. $\frac{1}{4}$ at sufficient intervals to keep the patient confortable.

April 15th. 8 *a. m.* Pulse 130; abdomen quite tympanitic, but not painful; has been sweating profusely; bowels constipated.

Ordered ol. ric. ʒvj., ol. tereb. gtta. xx. After bowels have moved, the tonic mixture to be given as before; also, pot. nit. gr. x., morph. sul. gr. ¼, every four hours.

9 *p. m.* Had a copious clay-colored evacuation during the day. Pulse 149; breathing 38; restless.

April 16th. 9 *p. m.* Pulse 158; breathing 40; tumor has increased in size; in great distress from distension and pain in the side. Treatment continued.

April 17th. Complains of severe pleuritic pains above the swelling over the whole right side of the chest.

On careful examination, a deep, obscure fluctuation can be detected in the prominent part of the tumor. As the symptoms were rapidly becoming more serious, from an extension of inflammatory action, and Dr. B. believing that a sufficient amount of adhesion had already taken place between the surface of the liver and the abdominal parietis, he determined to give it vent externally without further delay. A small trocar was thrust in at the point of fluctuation to the depth of a couple of inches, and a narrow opening made in the direction of the obliq. ext. muscle. Its withdrawal was followed by a rush of gas, intolerably fetid, and a quantity of dark, sero-purulent fluid, with which were intermingled minute, cheesy-looking particles and shreds, which, under the microscope, were found to be of a tuberculous character. About a pint and a half was discharged with a considerable lessening of the distension, to the great relief of the patient. A tent was then introduced, and a poultice of flaxseed applied over the whole surface. Ordered tr. cinch. ʒj., quin. sulph. gr. j., with ar. sul. ac. gtt. xv. every six hours.

April 18th. Became restless during the night, with symptoms of sinking. Gave brandy punch every hour or two until pulse came up.

9 *p. m.* Pulse 108. No discharge since yesterday; distension again taking place. Introduced a probe, which was followed by an emission of fetid gas, with the escape of six or seven

ounces of dark serous fluid, and a small quantity of healthy-looking pus.

April 19*th.* 9 *p. m.* Pulse 100. A small quantity of serous pus flows from the opening continually. Tonic treatment continued.

April 20*th.* The discharge being interrupted from a constant clogging up of the small aperture within, the knife was inserted the second time and the opening enlarged, which resulted in the immediate evacuation of a pint of thick, offensive pus.

May 11*th.* The patient has been kept on the same treatment since last date. A slight discharge from the abscess has taken place daily with occasional probing, but is gradually decreasing. Patient has improved in strength and appearance, sitting up several hours during the day, with moderately good appetite. His bowels have been torpid, but readily acted upon by mild purgatives, especially the salines. Dejections have all been of a light clay color. Quinine discontinued, and tr. cinch. with ar. sul. ac. given as before.

May 13*th.* Early this morning, while getting out of bed, the patient suddenly felt an increased flow from his side, and, on removing the cloths, found them saturated with a fluid of an intensely yellow color. On examination, it was found to possess an alkaline reaction, and to have all the properties of hepatic secretion, and oozing out continuously with the purulent matter from the opening.

Dr. B. remarked, upon his next visit, that the gall bladder had evidently given way under an extension of ulceration, as so large a discharge could not otherwise be accounted for.

May 14*th.* Had an evacuation of natural consistence, but of a chalky whiteness. Bile continues to pass out freely with the ordinary matters, which have almost entirely ceased.

May 16*th.* Discharge of bile continues.

Ordered a piece of oil silk to be laid over the fistula and compress applied, with a view of directing it again in its proper channel.

May 17*th.* Had a chill last evening, which lasted half an hour, and was followed with slight febrile reaction. Compress removed, and an ounce of viscid bile and pus escaped. Com-

press again applied. Bowels constipated. Ol. ric. ℥j. Afterward tonic treatment, as before.

May 21st. Complains of headache, want of appetite, and has become intensely icteric. Compress removed daily, and, on slight pressure, a quantity of bile and pus escapes—about equal parts of each—and occasionally a small quantity of transparent ropy fluid. Ordered quin. sulph. gr. xv., divided into four parts, and given at intervals during next twenty-four hours.

June 2d. The icteric hue, which had almost entirely disappeared, has returned with greater intensity than before. A deep yellow coat on the tongue, and the patient's saliva, which is secreted abundantly, has a perceptible yellow tinge. Bile is also detected in his urine. Fistula discharging pus, but no bile.

June 3d. Last night, was seized suddenly with an excruciating pain in the right hypochondrium, extending into the epigastrium, and a heavy pain also in the lumbar region. His pulse became slightly increased in rapidity, but compressible, and the skin moist and not above the normal temperature. The distress was evidently caused by the passage of a calculus along the biliary duct. Patient continued to suffer exceedingly for a couple of hours, with knees flexed on the abdomen, and able to lie only on the right side. Applied fomentations of hops, and gave morph. gr. ¼ at short intervals, until he became quiet. Ordered this morning,

Hyd. sub. mur.,	gr. iv.
Sod. bi-carb.,	℥ij.
Morph. sulph.,	gr. j.

Divided into four powders, and give one every three hours; afterward, the tonic mixture as before.

June 9th. Pain in side; anorexia and restlessness. There has been no discharge of bile for several days, but an increase of healthy pus, and a constant flow of the muco-watery fluid spoken of previously. Yellow hue of the skin continues. Probed the fistula thoroughly, to induce a reflow of the biliary secretion, which has evidently been obstructed in its passage through the fistula, and is the consequent cause of an aggrava-

tion of symptoms. Prescribed nit. ac. ʒj., aqua ℥ij. Give ʒj. every six hours, instead of tr. cinch. and elix. vit.

June 10th. Bile again flowing out. Patient slightly better.

June 15th. Had an evacuation this morning of nearly natural appearance. The icteric hue is disappearing, and the patient seems to be gradually improving in every respect.

June 25th. Is able to walk out of doors, but complains of a dragging sensation in the right side, which is relieved by wearing a supporting band. Stools are slightly bilious, but not entirely natural. But little discharge of any kind.

July 2d. Feels well. Has concluded to go home, but will continue to use the nitric acid mixture for a couple of weeks yet.

Aug. 3d. Called at the office to-day in fine health and spirits. The fistula has closed up entirely, and there is no pain or tenderness on moderate pressure. Says he feels as if something bound him in the side when standing erect and throwing his head and shoulders backward; otherwise, he feels as well as he has ever been.

During the time the patient was icteric, or the bile flowed through the fistula freely, no evidence of bile existing in the fæces could be detected upon common examination. From the time it began to greatly diminish in flow, the patient was jaundiced, and he suffered under the poisoning influence of bile in the circulation; this latter subsiding gradually, as yellow fæces began to make their appearance.

Case 2. J. T., about thirty years of age, an Irish laborer, of dissipated habits, admitted July 9th, 1858. Had generally enjoyed good health, until within the last year his constitution had become weakened from exposure and excessive use of alcoholic drinks.

History.—Three months previous to his admission, he began to complain of a dull, heavy pain in the right hypochondriac region, accompanied with loss of appetite and impaired digestion, which, in a short time, debilitated him to such a degree, that he was compelled to abandon his daily labor. A gradual accession of other morbid symptoms succeeded, and, at the end of eight weeks, he was unable to leave his bed. At about this

stage of the disease, an indurated swelling was observed at the seat of pain in his side, which continued to enlarge, and, at the time of admission, the painful distention seemed to constitute the chief distress of the patient. Has had but little medical treatment, and been but indifferently supplied with the means requisite to comfort, being at one time an inmate of the county house.

His condition at time of admission is one of extreme emaciation. Eyes are sunken; upper lip retracted, and countenance expressive of the most intense suffering. Tongue coated with a brown fur; breathing rapid; pulse feeble and frequent; skin sallow, and bathed in a profuse cold sweat. Is able to lie only on the right side with knees flexed, and is tormented with a constant vomiting of dark bilious matters. Bowels obstinately constipated. A large fluctuating tumor distends the epigastrium and right hypochondrium, and encroaches on the diaphragm, preventing its descent during inspiration. On applying the ear, a well marked friction sound is audible over the whole surface, showing an absence of adhesion between it and the abdominal parietis.

The patient's greatest distress arises from a constant dragging down, and a sensation as if some of the membranes or viscera were being torn from their attachments within the abdomen.

Diagnosis.—Inflammatory enlargement of the liver, with extensive abscess. The prognosis being hopelessly unfavorable, little else than palliative treatment was deemed advisable. A poultice, wet up with an infusion of aconite, was placed over the tumefaction; internally, hyd. sub. mur. gr. ij., rhei. pulv. gr. xv., every two hours until the bowels move.

July 10*th.* Much the same; had an evacuation of hard, brown-colored fæces.

Prescribed morph. gr. ¼, every three hours; also, pot. iod. ʒj. aqua ʒij., dose ʒj. every four hours.

9 *p. m.* More comfortable and dozing.

July 11*th.* About midnight was seized with lancinating pains over the whole abdomen, which became tympanitic and exceedingly tender to the touch. Patient has continued in extreme agony, notwithstanding large doses of opiates internally and

anodyne fomentations locally; pulse almost imperceptible; giving brandy with morph., frequently repeated.

July 12th. Died at three o'clock this morning.

Autopsy, ten hours after death.—The peritoneal membrane showed evidences of intense inflammation, and its cavity was filled to the utmost tension with effused fluid, with which were intermingled a quantity of dark purulent matters and shreds of coagulated lymph. The liver was the only organ examined. The left lobe was slightly larger than normal, very firm and elastic to the touch. The gall bladder contained an ounce of greenish viscid bile. The right lobe was enormously enlarged, occupying the whole right hypochondriac, the epigastric, umbilical and right lumbar regions, and pressing upwards on the diaphragm. Slight adhesions had taken place along the outer border of the lobe, and at a little to the right of the centre of the convex surface—which was a mere film in depth—a small opening existed, about the size of a large crow quill, leading to an extensive abscess, containing about three pints of dark, thick, fetid pus. Through this opening the contents had found an exit into the peritoneal cavity, and produced death from the inflammation and effusion consequent upon its irritant action.

ARTICLE IV.

REPORT OF A FOREIGN BODY IN THE ŒSOPHAGUS, AND ITS TRANSIT THROUGH THE ALIMENTARY CANAL; QUICK AND SAFE RECOVERY.

BY J. W. REDDEN, M.D., OF WAPELLA, DE WITT CO., ILL.

(Read before the DeWitt County Medical Society, at the Quarterly Session held in Mount Pleasant, on Monday, July 5, 1858, and published at the request of the Society.)

MR. CHAIRMAN AND GENTLEMEN,—I propose offering a brief report of a case, which to me seems quite interesting and rather anomalous; and, in doing so, I trust you may be amply repaid for the time and attention it may occupy. It relates to the enlodgement of a foreign body in the œsophagus, and its transit through the alimentary canal.

Of all the varieties of disease which are chronicled in the

nosology of the medical science, perhaps there are none which are attended with such immediate and alarming symptoms, and which call forth so extensively the sympathy and anxiety of bystanders, as *foreign bodies* in the air passages and alimentary canal. It is a time when parents and friends are agitated, confused and boisterous. It is then the physician's skill and ability are tested. It is then judgment and discrimination are valuable; for he is called upon to act promptly, boldly, correctly. All eyes are centered upon him. Hopes and fears commingle. He must calm their commotion, quiet their fears, and exert his professional ingenuity in his unceasing efforts to rescue a fellow-being from impending dissolution.

On Monday morning, May 17, 1858, about ten o'clock a. m., was called, with Dr. Wright, to see an infant. The messenger was in great haste, much agitated, and stated that the child had just swallowed a piece of glass and was nearly suffocated. In a few minutes we reached the house, being but a short distance from our office. Found that the babe had been quite asphyxiated, but had just become relieved from the intense paroxysm. It was a girl ten and a half months old. The mother had left the babe playing with its sister, and in a few moments returned to find her child in an alarming condition. Respiration slow and very laborious; child restless and much agitated; deep and dark venous congestion of the neck and face: in fact, animation was nearly suspended. It rolled to and fro, gagged, and made some efforts to vomit, when instantly a favorable change occurred. The paroxysm abated, its face assumed its natural hue, she became calm and nursed readily. We ascertained from the little girl that her sister had swallowed a piece of glass. From her description, we supposed it a long, narrow piece of window glass. A careful examination of the throat revealed nothing unusual. We gave it as our opinion that the foreign body had passed into the stomach. The mother was assured that for the present she need have no fears, and we advised her to watch the evacuations, for in all probability she would find, in a few days, the glass had passed impacted in the fæces. At the time, her health was very good, the bowels regular, and the fæces of natural consistence. Hence, we ad-

vised no medication, but requested the mother to be watchful, and if any alarming symptoms arose, straightway to make it known.

Now, some may suppose that here is a proper occasion to interpose an objection, and suggest that this was the proper time for the administration of a prompt emetic, or brisk cathartic, and also contend that such a plan of treatment would have been far more appropriate. We opine not; for our judgment assured us that this would have directly interfered with the acts of kind nature—the invaluable friend of medical art, without which man's skill is limited. Therefore, for a moment, let us pause and settle the objection.

If an active emetic had been given, true, it might have dislodged the *body* from the stomach, but in the efforts to throw it off, would it not in all probability have produced serious laceration, or even fatal impaction? We think so.

But what of the cathartic? Surely, it would have diminished the consistence of the fæces, increased the peristaltic motion of the intestines, and very likely have lacerated their coats, ending in perforation and death. Then, could anything have been gained by this plan? Certainly not. Could any other course more appropriate be suggested? No.

Here, we will remark, that the management of the case was satisfactory and gratifying, as its termination fully proves; for, on Wednesday afternoon following, about four o'clock, the parents had the delight to find that the foreign body had passed, encased with fæces, being about fifty-six hours since it was swallowed.

In a short time we received the specimen. Upon examination and measurement, we find it a concavo-convex, angular and very irregular piece of glass—perhaps a fragment of a tumbler. It is about $\frac{3}{4}$ of an inch in length, varying from 1-16 to 5-16 of an inch in width, and from 1-16 to $\frac{1}{4}$ of an inch in thickness.

Theory.—The babe, while having the glass in its mouth, no doubt made an effort at deglutition, at which time the glass passed through the pharynx into the œsophagus, where we think it became entangled. The body was liable to have

become impacted in the pharynx, or especially at the entrance or exit of the œsophagus. I am rather inclined to think, however, that it became entangled at the aperture or entrance of the œsophagus; for, had it lodged in the pharynx, it is very plausible to suppose that the efforts and struggles of the child would have expelled it. And had it passed the entrance or constricted portion of the œsophagus, it would, quite likely, have passed through the œsophagus without impediment.

But having passed through the pharynx, it came to the mouth of the œsophagus; and in consequence of this canal being flattened, narrow and constricted here, from the larynx projecting backward, it is possible—yea, highly probable—that at this point the foreign body became impacted; and from the distension and irritation of the parts, spasm of the glottis supervened, impeding respiration, retarding circulation, and, as the symptoms indicated, would soon have resulted in true asphyxia. For if a foreign body becomes impacted in the œsophagus, it produces a sense of choking and fits of suffocative cough, and if unrelieved, this may soon lead to suffocation by spasm of the glottis. But through the struggles of the child and its efforts to vomit, the spasm became relieved, and the foreign body, by its own gravitation, passed into the stomach. We think it must have passed base foremost, through the intestinal tube, guarded by its fæcal case. Be this as it may, it is an ugly, uneven and dangerous piece of glass, and would naturally lead one to apprehend the supervention of alarming symptoms. During its transit through the intestinal canal, no one could give other than a guarded and doubtful prognosis; for how easily might it have been detained impacted and lead to active peritonitis, and, perchance, fatal perforation. But no symptoms, either alarming or apprehensive, resulted.

The child seemed calm, playful, jovial; evinced no pain, fever or peevishness. For a few hours, however, following the passage of the glass, it was rather cross and irritable, resulting, no doubt, from the irritation during its transit through the rectum.

The child is now one year old; is active, robust, and has every indication of uninterrupted health.

What seems most remarkable in this case is, the age of the child, the size of the glass and the facility with which it passed. This is one of those emphatic cases, which so clearly and forcibly verifies the ancient maxim, "Vis Medicatrix Naturæ." It should also teach all physicians ever to evince proper discrimination, to judge when and when not to act; for it should always be remembered that meddlesome interference is a dangerous thing. And never can we be too forcibly impressed, in all our acts and observations through life, that Art is only the handmaid of Nature.

ARTICLE V.

INFLAMMATION, ULCERATION AND INDURATION OF THE OS AND CERVIX UTERI, AND USE OF THE SPECULUM.

BY W. M. CHAMBERS, M. D., OF CHARLESTON.

(Read before the Esculapian Society, at its Annual Session in October, 1857.)

The facts and views of the following gentlemen will be made use of indiscriminately, viz: Drs. Lee, Bennett, West, Whitehead, Tyler Smith and Churchill, of London; Dr. Simpson, of Edinburgh; and Drs. Meigs and Miller, of our own country. These, I believe, comprise the names of all who have figured extensively in the investigation of the questions under consideration.

Claiming to have been somewhat of an observer of the progress of medical science for the last twenty years, I have no hesitation in saying that more light has been thrown upon the diseases and natural functions of the female reproductive organs, than upon either of the other two arbitrary divisions of professional knowledge. It is impossible to state which of two causes have contributed most to this very desirable state of things. Whether the fact, that it has laid claim to a higher position than that formerly assigned it, of being consigned to old granny women of both sexes, or by that of having the attention of men of superior minds directed to its consideration. Although great improvement has taken place in surgery and practical

medicine, yet not to the extent which has been witnessed in this department of our profession.

The attention of medical men of distinction was more particularly directed to this department about 1845 or '46, since which time the anatomy, physiology, pathology, diagnosis, symptoms and treatment have undergone an ordeal which is highly creditable to many of those whose names we have mentioned. At the same time, much has been said in an angry, snarling way, which is a source of regret in more respects than one. One source of regret is, that in this state of things the statements of the parties are so positive, and yet so divergent, that it makes it no easy thing for those who are not familiar with the subject, to arrive at any very satisfactory conclusions as to who is right or who is wrong.

I really feel at a great loss how to present the subject, and approach it with fear and trembling. It is that kind of trembling a man feels when he takes hold of a knife for the first time, to perform an important operation. The reason I tremble is not so much from want of familiarity with it, as because I am not yet satisfied what shape to put it in so as to render it most acceptable to the society, but believe, to eschew system, and present the matter as it occurs to my mind, will be attended with as much success as in any other form it could be presented.

Ever since I have been a practitioner of medicine, a class of cases have presented for treatment with about the following symptoms. In most instances the patients are married women, some of them have been married for years and never been pregnant; another class have been frequently impregnated, but never carried the fœtus to the full term of gestation; while yet another class have had one or more full term healthy children, and are now either barren or frequently aborting or miscarrying. I do no not say that virgins are never afflicted with the symptoms about to be enumerated, but, so far as my own observation extends, the instances are exceedingly rare. In most cases, you will elicit about the following account of the condition of the patient: feebleness is written on her brow and seen in her very motion. She is generally thin and pale, or else subject to an occasional flush of the face. The tongue is broad and flabby.

The pulse is quick and sometimes intermitting. Upon inquiry, it will be found that she has lost from ten to thirty pounds of flesh. She will tell you she has pain in her back, pain in her side, pain in her head—the recumbent posture affords little or no relief to pain in the back. She has palpitation, which may be produced by slight exertion, or may awake her in the night or while she is in a perfect state of repose. She has tenderness over the region of the stomach; tenderness somewhere in the course of the spinal column; sour stomach, which is indicated by acid eructations; costiveness and diarrhœa alternately, neither condition evincing any want of biliary secretion; the appetite is variable, but in most instances is poor; she is easily frightened, and nervous to an intense degree. She has leucorrhœa in variable forms, worse or more profuse after the regular monthly discharge, which by the way may not be so very regular, either too often or not often enough, or too profuse or spare, sometimes continuing eight or ten days or only one or two. The leucorrhœa may be of a milky consistence, or thick and resembling the white of an egg, or yellow, or green, and smelling very offensive. After each monthly evacuation, when there is leucorrhœa following, you will be told that there is great pain in voiding urine, with a frequent desire to do so. In some few instances there may be no leucorrhœa, with, however, all the other symptoms. The patient is not confined to the bed all the time, but has to take the recumbent posture frequently through the day. These symptoms have been present in a greater or less degree for months or years. It will be found, on examination, that the heart presents no organic lesion as far as auscultation will reveal anything. The most searching investigation will not detect any lesion of the stomach, liver or bowels. There are no lung symptoms, and so far as the brain is concerned, none among us would be rash enough to pronounce it in an abnormal condition, unless through the medium of sympathy. The skin and kidneys are performing their functions in a blameless way. Now it used to be the case that, finding these symptoms with the normal conditions we have spoken of, the physician was in the habit of saying to his patient, "Well, madam, I think you may be relieved," and has made, perhaps, a promise of a cure.

He starts out to relieve some of the more prominent functional disturbances, and at first for a few days he is in raptures, so is his patient, but weeks and months roll on and still these symptoms will occur again and again. Such cases, before he is long in the profession, become the plague of his life. His books are searched in vain, his brain is racked, his nights are sleepless, and his reputation is on the wane.

But let us see what he has been doing. He has cupped the spine, and made counter irritation; he has cupped the sacrum, and blistered it, and kept it sore; he has given mercury and alteratives of various kinds; given tonics; ordered exercise to be taken without fatigue, and a diet to suit these conditions; used injections for the vagina, and kept them in constant use, and yet neither the general nor local symptoms are relieved, and this course of practice is precisely in keeping with that recommended by Dewees, Churchill, Lee, Meigs, Ashwell and Columbat, and more recently by West and Tyler Smith. I would not say, in any instance, that the course recommended by those gentlemen would be unsuccessful, for there may be cases with well marked symptoms where there is great recuperative power, when a cure might possibly be effected. The treatment here spoken of corresponded with the notions entertained by writers upon female diseases, and was in accordance with their views of the pathology of the reproductive organs, with this exception that we were told that in some of the cases we would find prolapsus of the uterus, and for this various kinds of pessaries were devised, and in some instances we were told to cut out a longitudinal fold of the mucous membrane lining the vagina, and thus narrow its walls and prevent the descent of the womb in that manner. The profession sat down and folded their hands with this state of things, and left their patients to eke out miserable existences.

The publication of Dr. Bennett's papers in the London *Lancet*, and the reading of his paper to the College of Physicians in the year 1845, startled the medical men of London like a shock of electricity. He said these symptoms were caused in a great degree by inflammation, ulceration or induration of the os or cervix uteri, or both, and that the constitutional symptoms

would not yield until the local disease was removed, which could alone be accomplished by local remedies. I did not see Dr. Bennett's views of this subject until I had read Dr. Whitehead's work on Abortion and Sterility, in which he sustains the views of Dr. B., and in a very clear and concise manner gives cases to illustrate his views. Since that time I have made myself somewhat familiar with the views of Dr. B. Dr. Robert Lee, for whose talents I entertain the highest regard, read a paper upon this subject before the Medico-Chirurgical Society shortly after Dr. B.'s publication, in which he uses the following emphatic language, which may be found in the transactions of the society in vol. XXVIII. page 275, "*Neither in the living nor the dead body* have I ever seen ulceration of the os and cervix except of a *specific* character, and especially scrofulous and cancerous." Now if it be true that no other ulcerations ever occur but from cancer and scrofula, then Dr. B.'s notions and views amount to no more than a myth. In 1850, Dr. Tyler Smith read a paper before the same society, I believe, which was subsequently published, in which he elucidates similar views to those of Dr. Lee. In 1854, Dr. Charles West delivered the Croonian lectures. His subject was "An Inquiry into the Pathological Importance of Ulceration of the Os Uteri," in which he admits the existence and the *frequent* existence of inflammation, ulceration and induration of the os and cervix uteri, but concludes their existence are of slight pathological importance, and "of small semeiological value; a casual concomitant, perhaps, of many disorders of the womb, but of itself giving rise to few symptoms, and rarely calling for special treatment." In the October number of the *Medico-Chirurgical Review* for 1854, at page 248, Dr. Churchill reviews the lectures of Dr. West, and coincides with his views to a very great extent, but thinks he admits the existence of ulceration too much. In 1855, Dr. Tyler Smith publishes his great work on leucorrhœa, and there virtually admits nearly all Dr. Bennett has contended for in the way of pathology, but condemns the use of the stronger caustics and the actual cautery. Dr. Bennett's doctrine may be presented in a few words. He believes that inflammation, ulceration or induration of the os and cervix uteri may be

regarded as the first in a train of processes, which are the direct or indirect occasion of by far the greater number of ailments of the generative system. Dr. Simpson, of Edinburgh, bears ample testimony both as to the pathology and treatment of Dr. Bennett, as do Drs. Meigs and Miller of our own country. Thus it will be perceived that there is a strong array of talent on both sides.

A number of fastidious gentlemen have objected to the course of Dr. Bennett, on the ground that it is an unnecessary exposure of females. If it is true, however, that they can be benefited by exposure and in no other way, then the objection is worthless.

Let us now review these gentlemen. Dr. Bennett reads his paper and subsequently publishes his views, in which he contends for the principles already stated, viz: that ulceration of the cervix produces a train of symptoms which will not always yield to general treatment, and cannot be accounted for upon any principle of rationality unless it is found in the os or cervix, and cannot be cured except by local applications. Dr. Lee and Dr. Tyler Smith read papers in which they deny the existence of ulceration of the os, but most strangely admit (both of them) that they frequently found granulations secreting a peculiar pus or something of the kind, and fissures and indurations of the lips of the os, and sometimes abrasions, none of which were preceded by inflammation or attended with ulceration. Dr. West subsequently read his lectures, in which he confessed the frequency of both inflammation and ulceration of the os and cervix, but denies their importance. Dr. Churchill reviews and says that abrasions have not existed, but instead it was congestion, thus admitting a state of inflammation to follow. Dr. Tyler Smith follows with his work on leucorrhœa, in which he contends for the treatment of the granulations, indurations, etc., by the same class of remedies recommended by Dr. Bennett. Dr. Bennett in the May number of the London *Lancet* for 1856, page 397, thus concisely states his position: "Now if I, as a practitioner, have found, during a long series of years, that I have constantly been consulted by young sterile married women, in whose history I can trace the evidence of uterine mischief, dating from the earliest period of their married life, or even

from an epoch antecedent to it; if, on examination, I find some chronic inflammatory uterine lesions, say ulceration; if I treat the local disease and cure it; and if a considerable number of these women subsequently became fertile,—am I not warranted in considering the local disease as the cause of their sterility? If, again, I find married women who have had children often becoming sterile for years, after a tedious or instrumental labor, which has left traces of uterine suffering; if, discovering this condition to be connected with local inflammatory mischief, I remove it by treatment, and they subsequently in very many instances again become pregnant,—am I not warranted in considering the temporary sterility of these women as occasioned by the temporary local disease? If, on the other hand, I find that women who are continually aborting or miscarrying are generally suffering from symptoms of uterine ailment, and present, on examination, local inflammatory lesions, mostly inflammatory ulceration, and on thoroughly removing these lesions, I find that a large proportion of them at once go to the full time, and are delivered of live children,—am I not warranted in concluding, that in these females the existence of inflammatory disease was the cause of the abortions and of the premature termination of the pregnancies." In this late review of the present state of uterine pathology, Dr. B. reports cases by the hundred, of complaining women whose symptoms would not yield to ordinary remedies, but readily to local remedies and appliances in conjunction with general treatment. Dr. Whitehead gives, as before remarked, the cases as he goes along, and fairly coroborates Dr. B. Dr. Simpson goes still farther than Dr. B. in the application of caustics, and endorses his views throughout. Dr. Meigs relies more on general remedies, but says, "where there is albuminous leucorrhœa it is a sign of inflammation of the cervix, in which is included the canal with its copious muciparous apparatus. It is as much a surgical disease as an ulcer of the leg, as anthrax or conjunctivitis. When the surgical disorder is cured the sign disappears," but he denies the ulceration, and, contrary to Dr. Tyler Smith, admits the inflammation. Dr. Henry Miller, of Louisville, Ky., supports the views of Dr. Bennett, and to my own knowledge

has been wonderfully successful in curing cases of long standing which had failed to yield to the old plan of treatment in the hands of the most skillful men in the profession. This is bringing the matter pretty near home, and if I may be allowed I will add that since 1849 I have been in the habit of serving a number of the cases whose symptoms I have given some pages back, and the success has been of the character spoken of by Drs. Bennett, Simpson and Whitehead.

I confess that I have never resorted to the more formidable caustics and escharotics, I having probably felt my way with more caution than some others, and in the majority of instances made an effort to benefit the patient by some constitutional treatment, and at all events improved the digestive powers before local treatment was resorted to; but at the same time I think I can see a propriety in the use of escharotics, especially in indurations and hypertrophies.

I should feel that my paper would be incomplete unless reference was made to the local pathology of the disease. When it is found necessary to make an examination (and just here we might, as I conceive, argue the propriety of when that should be done), I contend that a digital scrutiny should be made whenever there is a strong suspicion of uterine derangement (and there are very few who are on the list of complaining women who are not thus deranged); and if, instead of the smooth, round, greasy feel which a healthy condition would indicate, we find a widening of the os, or tenderness, or displacement, or hardness, or roughness, it will be the imperative duty of the practitioner to resort to the speculum. The utmost concern for the welfare of the patient should be manifested, and when the speculum is used he will find revealed a state of things which, to those unaccustomed to the use of this instrument, will be surprising, a broad surface of granulations spread out around the os extending into the cervix. Sometimes this is so extensive that the entire surface is not perceptible through an ordinary glass or ivory speculum; again it may be that the lips of the os are only parted, and the granulations are entirely within the cervix. Fissures sometimes present themselves, and a thickened hard edge of the os, either of the anterior or posterior lip, or

both, are perceptible. In a number of instances, a plain ulcer with well defined edges may be seen presenting on the edge of the os, or on an out-turned lip, from cervical granulations. In some instances there are granulations, and in some it is a smooth, polished, raw surface, with many variations and modifications.

Now Dr. West says these conditions have nothing to do with the production of general symptoms. I would suggest that the opposite sex are not addicted to these long spells of unaccountable sickness. That an increased discharge, whether healthy or unhealthy, will produce debility—weakness; that no part of the organism is so destitute of vitality but, if it is kept constantly irritated, must produce more or less debility of the general system; that it is not conclusively settled whether or not the cervix is less vitalized than other organs or textures; and if it were settled that it was, it would not prove conclusively to my mind that the drain upon the system which is witnessed in the discharge would not drag down the entire organism, and produce the very train of symptoms which has been enumerated, nor that the arresting of this drain, and curing these granulations, and ulcers, and indurations, would not be attended with benefit. I say it would not convince me that Dr. West's views are correct, because I have the testimony of others as reliable as he is, that the pathological condition exists (he admits this much himself), that the train of symptoms are present, that they will not yield to general remedies, that they will to local remedies, that so soon as the local mischief is removed the patient gets well; and besides this testimony, I have my own observation, which corroborates all these points. In order that I may not over or under estimate the number of cases which I have treated, both in conjunction with others and alone, I have taken the trouble to count the patients who I have known to be treated by local remedies and find that they amount to fifty, and I can safely say that a cure was effected in nearly every instance. In two instances the relief was not perfect, but in one the patient had gained strength and became cheerful, and the remnant of the ulcer was scarcely perceptible, and I have not a doubt but the cure would have been perfect if she had remained under treatment, but her husband packed up his plunder and on a

night left for parts then unknown to me. The other was a lady, forty-two years old, barren, and, I fear, too highly endowed with sexual propensities to be true to her lord and master, and I am not sure whether she recovered or not, but the last time I heard from her was some six months after my attention ceased, she had not become pregnant to her knowledge. Thus it will be seen that there are really forty well marked recoveries, which is enough, in my estimation, to establish not only the propriety but the necessity of local applications.

From these facts, gentlemen, from others and my own observation, it is plain that I should resort to local applications whenever the symptoms would resist general treatment, but at the same time I heartily detest and loathe the man who would needlessly subject a woman to either digital or instrumental examination. Having satisfied my own mind upon this subject, I shall at once proceed to the local treatment. Before doing so, however, I will add, that I do not think in any instance the importance of the disease should be magnified in order to induce a woman to submit to the examination.

After the digital examination is made, which may be done while the woman is in the recumbent posture (either on her back or side), or in the erect posture (and it will be frequently found that this latter is necessary, in order to make out the condition of parts, as, for instance, when there is prolapsus or other displacement), the patient will then be told that there is a disease at the neck of the womb, and that she will have to undergo (not submit) further examination, and that she may have some lady friend present on a certain day and hour, and be prompt to the minute. He will select a light in the second floor, if possible, placing the woman with her hips to the light; but before he commences, he should have a bowl of water, some sweet oil or sweet lard, a ball of soap, a towel and a sheet. The light should enter the room from only one source, if possible, and that fronting the side of the bed, and for a steady light I should select the hour of two p. m., and let it come from the north. It is best the patient should lie on a mattress or straw bed, in which case it will not be necessary to have her hips to the edge of the bed, otherwise it might be; nor would it be of the first importance

then to have the side of the bed to the light, but if it is just as convenient it is best. It is a matter of habit with the practitioner whether the patient is placed on her back or on the left side. I prefer the latter, but have practiced both. After the patient is thus placed, the sheet should be folded once only, and taking it in the hand, the physician walks to the bed, conversing upon some trivial subject in which the patient is interested; he places the sheet under her clothes and next to her skin, bringing the ends of the sheet around her legs, and places the corners against the external organs. He is then to make a digital examination and find out the condition and position of the os, and then after oiling his instrument (the valvular speculum, and I give preference to the form valve), and having his probang well armed with a soft sponge, to lay on the bed and within reach, he continues the conversation, foreign from the one he is engaged in, and introduces the speculum, which is accomplished by taking the instrument in his hand or thumb and fingers, placing the end within the vulva and pressing gently upwards and backwards, having the anatomical structure of the parts in view, the handles pointing to the sacrum. After it has reached the point in the vulva, where the blades are fastened, he should cautiously and steadily approximate the blades, which will at once enable him to withdraw the director, when with the screw he brings the blades together, keeping in view all the time the necessity of grasping the instrument in his left hand with folds of the corners of the sheet around it, so as to prevent exposure of external parts. Thus he has brought all the internal organs into full view. His attention must be directed first to the condition of the os and cervix, and he may compare the membrane lining them with the color of the membrane which lines the mouth and fauces of his patient, which he will have done before he commences the investigation which is now going on. If there be much secretion of pus or other material, he can remove it with the probang, and then determine the nature of the case. If there be fissures, granulations or ulcers, he can pretty well determine their extent, and cautiously withdraw his instrument, and at once introduce the ivory or glass speculum; and here is a matter of the utmost difficulty with beginners—

no force must be attempted upon any pretext whatever. After passing the vulva, the great object is to have the neck of the womb fill the end of the speculum. If he has well studied the position of the os, he will commonly succeed the first effort; if not, he may have to partially withdraw it a number of times, but as a general thing he will succeed by holding the outer end of the instrument as high up toward the symphysis pubis as is compatible with the comfort of his patient, whom he is to inform that it is not necessary to hurt her, and if he should to let him know. Some little manipulation will be found necessary in all cases, and the physician must not be discouraged if he has to spend some time in finding the os. Once found, with this instrument he is to have in readiness besides his probang, a caustic holder, armed with a smooth-ended piece of solid nitrate of silver and a very strong solution of the same, say forty to sixty grains to the ounce of rose water or rain water, and now exercising his judgment as to the intensity and extent of the disease, he applies to the full extent of the diseased structure. If he finds, instead of ulceration, granulation or fissures, a high grade of inflammation of either os or cervix, or both of these with the vagina, or the vagina alone, he will best succeed by the application of leeches, which may be followed by injections of nitrate of silver in solution, from six to twelve grains to the ounce of water, repeated every day. If it is of the class of cases where the nitrate of silver in substance is used, the investigation and reapplication must be repeated every five or six days, until the patient is well, or it is found that the acid nitrate of mercury has to be resorted to, which is to be accomplished by the use of a piece of lint or wool tied on to a piece of whalebone, having the internal part of the syringe well oiled and the solution well squeezed out of the lint so that it be not too wet, and then before removing the speculum it should be so turned that any part of the excess of the acid might escape into a basin which should be at hand for that purpose. The reapplication of this substance should not be made in less than seven or eight days, as the eschar formed by it does not fall off before that time, and then I have rarely seen it applied more than once; indeed, the necessity for it did not exist, the nitrate

of silver being generally sufficient to accomplish the remaining part of the cure.

It will thus be seen that I have not resorted to the potassa fusa nor the Vienna paste, nor actual cautery, having thus far succeeded without them.

I wish to add, before I conclude, that I am confident from my own observation that a great many of the cases of prolapsus and other displacements of the uterus owe their origin to ulceration of the os and cervix; and it doubtless occurs in the following manner: there is necessarily a determination of fluids to the lower portion of the womb, which increases its weight and renders the inferior parts for support least able to withstand the pressure.

Nothing has been said as to the causes which produce the disease. They are so prolific that their enumeration with the modus operandi would take up much of the valuable time of the society needlessly. Metritis is a prolific cause, sexual intercourse another, etc.

Dr. West says that ulceration, granulation, etc., "are of small semiological value," rarely if ever calling for the interference of the surgeon. I am inclined to think that the very argument he bases this conclusion upon is the one with which Mr. Bennett can sustain himself. For instance: Dr. W. says that this is true, from the fact, that the neck has a spare distribution of nerves, and in a healthy condition enjoys a low state of vitality as a consequence of this want of nervous distribution. Now, is it not true, that this very state of things would go to prove that the "vis medicatrix naturæ" would also be deficient, and, as a consequence, whenever that portion became diseased, nature would be incapable of performing a cure under ordinary treatment directed to the general health? then, if there is ever a necessity for local applications to cure local diseases, this is surely the case.

BOOK AND PAMPHLET NOTICES.

BUCKNILL AND TUKE ON INSANITY. Pps. 530. Published by Blanchard & Lea, Philadelphia.

It would afford us great pleasure to present to the readers of the Journal some extracts and make a few comments on the above-named work, but we cannot devote the space necessary to do justice to the work. It is a systematic treatise on insanity, correctly and ably, yet concisely, representing all the improvements in the diagnosis, pathology and treatment of mental disease.

To give the reader an idea of its general scope and character, we enumerate and copy the heading of the different chapters.

Chapter I. gives an historical sketch of insanity among the nations of antiquity, mainly in regard to extent.

Chapter II. sums up the opinions of ancient medical men on the treatment of the insane.

Chapter III. considers modern civilization in its bearing upon insanity.

Chapter IV. is a picture of the difference in the management of the insane by the ancients and moderns, and shows the present ameliorated condition with reference particularly to mechanical restraints of this unfortunate class of afflicted.

Chapter V. speaks of the definition of insanity, and dwells upon the great difficulty of properly classifying different cases so as to systematize the subject. This is an excellent chapter, and freely and ably discusses the subject.

Chapter VI. enumerates the various forms of mental disease.

Chapter VII. is devoted to the statistics and causes of insanity, proportion of recoveries, proportion of cases to the population in different countries, mortality of the insane, etc.

The chapters enumerated above are the production of Dr. Tuke, while all those that follow were written by Dr. Bucknill. They consist of Chapters VIII. on Diagnosis, IX. Pathology, and X. Treatment of Insanity. They are readable, thoroughly practical and reliable.

The work is wound up by an appendix, containing cases

illustrated by portraits in the frontispiece. These portraits show the expression of different forms of insanity in the face, and of course are valuable assistance so far as they go.

It also contains cases illustrative of the treatment and management recommended by the authors as modern representatives of the profession. Also, cases illustrating causation and pathology, so far as may be done without clinical observation.

This book, we think, is just such an one as the profession needs, and emanating from the source it does, have no hesitancy in recommending it to any of our readers who desire to be supplied with the information becoming indispensably necessary in regard to insanity. It is not intended particularly for the specialist in this department of medicine, although full and thorough, but is adapted more especially to the wants of the general practitioner. It may be bought of Mr. Keen, of this city.

W. H. B.

A Practical Treatise on the Causes, Symptoms and Treatment of Spermatorrhea. By M. Lallemand, formerly Professor of Clinical Surgery at the University of Montpelier, etc. Translated by Henry J. McDougall, Member of the Royal College of Physicians of England, etc., etc. Third American Edition, to which is added, "On Diseases of the Vesiculæ Seminales and their Associated Organs," with special reference to the Morbid Secretions of the Prostatic and Urethral Mucous Membrane, by Morris Wilson, M. D. Philadelphia: Blanchard & Lea. 1858. Pps. 380.

This excellent book should be in the library of all who undertake the responsible position of medical adviser. With reference to the subject upon which it treats, it is *the book*. On account of the importance of the subject, and with the hope of inducing a close study of this distressing assemblage of diseases, we give below a summary of impressions received from reading the book and the limited experience we have enjoyed. We desire to premise that it is very imperfect, and will only serve—we hope—to excite our readers to a desire for a complete acquaintance with it.

The symptoms are general and local. The main and characteristic local symptoms are when the disease is fully developed —loss of venereal desires, imperfect secretions, imperfect seminal ejections, seminal sediment in the urine, seminal extrusion during defecation, unconscious seminal dribbling or discharge

during lascivious dreams or thoughts at night, soreness or other abnormal sensations in the urethra or prostate gland or both. The early symptoms are the same, but more moderate in degree, the venereal erethism being rather uncommon, and leaving unpleasant sensations behind. When discharged in the urine, by letting this fluid stand, the semen will appear as a white granular sediment at the bottom. By gently decanting the urine, this sediment may be obtained in form sufficiently concentrated for microscopic examination. When discharged during defecation, it drops from the urethra in quantities varying from a few drops to a handful, and seems to be pressed out by the hardened fæces bearing strongly upon the distended and relaxed vesiculæ seminales. Or, when the discharge is effected on account of painful irritation of the rectum, it may be thrown off in jets. These are the common forms of diurnal emissions, and are regarded as the most destructive in their general effects of all others, and often overlooked or mistaken for something else. The nocturnal emissions are next most injurious, and are recognizable by the stains on the linen or the recollections of the patient. They may be accompanied by erection, and other energetic venereal manifestations, are involuntary and easier cured than the preceding variety. In regard to them it may be said, that more unconscious the patient is of them, the less venereal orgasm, the more injurious and obstinate they will prove. If attended with the vehemence and pleasurable sensations of ordinary venereal acts, they may be simply the effect of seminal redundance, and beneficial instead of injurious. When this is the case, the patient, instead of increased languor and uneasiness, will be in better spirits and more buoyant and healthful in feeling than before the occurrence. There is always also with these symptoms some soreness of the prostate testicles, urethra, or some other portions of the seminal mucous membrane.

The general symptoms are very various. Impotence is the most common, perhaps, in bad cases, either in consequence of inability for perfect coitus or unfit seminal fluid. The digestive organs in grave cases become profoundly affected, and the symptoms and nature of their diseases as diverse as possible.

Indigestion and constipation, with all their consequences, are particularly common. Nutrition and calorification deficient, the patient is emaciated, and subject to be affected with the slightest atmospheric changes. The respiratory and circulatory apparatus are so deranged as to simulate diseases of the lungs and heart, great muscular debility, derangement of sensation and power in the extremities to such an extent as sometimes to amount to complete paralysis of motion and feeling. Of all the senses the sight suffers most frequently; hearing, taste and smell likewise are often deranged. The manner of the patient is shy and timid—suspicious and morose almost to an insane degree. The sleep is disturbed; headache from slight inconvenient attacks, to the most violent congestive paroxysms, is likely to occur. There is also change of character, from amiable, liberal and ingenious, to peevish discontent and selfish exclusiveness. The most common and terribly harrassing mental affection is melancholy. In fact, hypochondriasis is supposed to be the disease in many instances, and the patient treated for it. We should never forget, however, that hypochondriasis is a *symptom* instead of a disease. The memory and intellect seldom escape long. They are drawn into the general ruin and soon wrecked, so that many of these miserable creatures find their way into the lunatic asylums of the land. The reader of Lallemand will scarcely fail to be forcibly reminded of Bennett. The general effect of seminal disease in men are very similar, according to Lallemand's description, to those so graphically sketched by Bennett as arising from diseases of the uterus in females.

The anatomy of spermatorrhea is inflammation almost if not quite universally. This inflammation commencing in blennorrhagia, or hyper-excitement from any cause, creeps along the mucous membrane of the urethra to the vesiculæ seminales, and into the follicles of the prostate gland, and into the mucous canals of the testicles through the vas deferens, impairing the secretory and excretory capacities of those organs. The semen is increased in quantity, becomes more thin, until it loses all virility, and failing to produce any stimulating effects, is evacuated in the unnatural modes above described.

Frequent causes are gonorrhea, cutaneous eruptions extending to the mucous membrane of the urethra, irritation of the rectum from ascarides, inflammation, stricture, obstinate constipation, hemorrhoids, etc. Masturbation, venereal excesses, lascivious reading and thoughts, various medicines, as cantharides, ergot, nitrate potassa, coffee, tea and many other articles, sebacious collections under the prepuce and glans penis in phymosis, hereditary tendencies, long continued continence, etc., are fruitful operating causes of this terrible affection.

The treatment is divided into general and local. The first has reference to the management of symptoms not immediately connected with the parts most intimately concerned. We should well consider every case in all its bearings, and apply remedies for the promotion of the general health.

The circumstances which attend spermatorrhea as causes and consequences are very various and complicated, as well as important, and will require the skillful application of general principles for their management. But it is to judicious local treatment we must look for the most marked results. Lallemand's mode of cauterizing the urethra is suited to perhaps most cases, and in making this application or resorting to any local means of cure we should remember that we do it for the relief of local inflammation of the urethra and modification of the irritability of the prostatic follicles, the canals of the vesiculæ seminales and perhaps the vas deferens. The same effect may be produced in some instances by introducing the catheter and allowing it to remain in position an hour more or less every day, or every other day, according to the effect it produces. Mr. Solly, of St. Thomas' Hospital, thinks that cauterization will cure almost every case if judiciously applied. We think that in cases to which the nitrate is applicable and would make a cure, it is applied so frequently as to often fail. The effects of each application should entirely subside for some time before it is again used; so long, in fact, as improvement continues. Sometimes the improvement is not apparent for several days after the cauterization. Acupuncture of the prostate in three or four different places from the perineum, with fine needles, allowing them to remain for two or three hours, will often do

good when it is very sensitive and irritable. An issue kept open for some time over the same organ also does a great deal of good. Dr. Wilson uses the nitrate of silver in solution, applying through glass or silver canula so as to make a direct application to the part without dilution or chemical alteration. These would take place if it were injected. Local treatment applied to the rectum when it is the seat of stricture, fissure, hemorrhoids, ascarides or other irritation, is indispensably necessary to the successful operation of other means, and will in itself often be sufficient to produce a completely favorable change.

W. H. B.

PROCEEDINGS OF MEDICAL SOCIETIES.

MEETING OF THE McLEAN CO. MEDICAL SOCIETY.

The society met in Le Roy on the 12th of July, 1858, and was called to order by the President, Dr. S. W. Noble.

The Secretary being absent, Dr. H. Noble acted as Secretary *pro tem.*

The constitution of the society was read by Dr. Luce and signed by Dr. Stewart and Dr. Laughlin, who had not before had an opportunity of signing the same.

Dr. S. W. Noble reported a case of cancerous disease of the stomach and liver, and exhibited the diseased structures.

Dr. Laughlin read an essay on the Improvement of Medical Science, which, on motion, was received and ordered to be put on file.

Dr. Fisher read an essay on the Ill Effects of the Use of Patent Medicines, which, after the usual reference, was discussed by Drs. Luce, S. W. Noble, Stewart, Fisher and Laughlin.

Dr. Stewart read an essay on Physiognomy, which was received and ordered to be put on file.

On motion of Dr. Luce, the thanks of the society were tendered to the Essayists for the prompt manner in which they discharged the duties imposed on them by the society.

The President appointed Drs. Coleman and Luce to read essays at the next meeting of the society.

By invitation of Dr. Laughlin, it was resolved that the society meet at Heyworth on the second Monday of October, 1858, at half-past ten o'clock a. m.

It was resolved that the Secretary be instructed to inform Drs. Worrell and Roe that they will have the privilege to continue and finish, at Heywood meeting, their discussion of Dr. Elder's paper, which was commenced at Bloomington on 12th April, and suspended by agreement to be continued at Le Roy meeting.

It was resolved that a committee of three be appointed to inquire into the matter of unprofessional conduct and violation of ethics, said to have been committed by Dr. Craig, a member of this society, and if they find sufficient reason therefor, that they prepare articles of impeachment against said Craig, and notify him that they will be presented to the society at its next quarterly meeting, to be held at Heyworth. Drs. Luce, Fisher and H. Noble were appointed said committee.

On motion of Dr. Stewart, it was resolved that the Secretary be instructed to transmit a copy of this meeting's proceedings to the *Chicago Medical Journal* for publication.

S. W. NOBLE, *President.*

H. NOBLE, *Secretary pro tem.*

ORGANIZATION OF MEDICAL SOCIETY OF MERCER CO., ILL.

Pursuant to previous notice, the physicians of Mercer County met at Aledo, August 31st, 1858, to organize a County Medical Society.

On motion, Dr. J. P. Boyd, of Millersburg, was called to the chair; and Dr. O. P. S. Plummer, of Aledo, was chosen Secretary.

On motion, a committee of three, consisting of Drs. Maury, Wood and Allen, were appointed to present a Constitution and By-Laws for said society.

The committee submitted the following Constitution and By-Laws, which, on motion, were approved and adopted, article by article:

CONSTITUTION.

ART. I. This society shall be known and designated the Mercer County Medical Society.

ART. II. The physicians present at the adoption of this Constitution shall be members of the Society.

ART. III. Any regular graduate of an orthodox school, or any physician passing a satisfactory examination before the Board of Censors, may become a member by a vote of the society.

ART. IV. The officers of the society shall consist of a President, Vice-President, Secretary, who shall act as Treasurer, and three Censors; to be elected annually by a majority vote of all the members present.

ART. V. The society shall be governed by the code of ethics adopted by the Illinois State Medical Society.

ART. VI. This Constitution may be altered or amended by a vote of two-thirds of the members present at any regular meeting, by giving notice one meeting previous.

BY-LAWS.

1*st.* The regular meetings of this society shall be the last Wednesday of August, November, February and May, the last of which shall be considered the regular annual meeting.

2*d.* The duties of the officers shall be those that usually pertain to such societies, and all officers shall be elected by ballot at the annual meeting.

3*d.* Each member shall report, in writing, a case, or read an essay at every regular meeting, and a stated essay shall be read at each meeting, the essayist to be appointed at the previous meeting, excepting the annual address, which shall be by the President retiring.

4*th.* The report of cases and essays made before the society at its regular meetings shall become the property of the society.

5*th.* Application being made to the President by three members, he shall, through the Secretary, notify the society of a called meeting.

On motion, the society proceeded to the election of officers, when the following were duly elected:

J. H. MAURY, - - - - - *President.*
J. P. BOYD, - - - - - - *Vice-President.*
W. R. FOX, - - - - - *Sec. and Treas.*
Drs. WOOD, PLUMMER and BENEDICT, *Censors.*

On motion, Drs. Wood, Plummer and Boyd were appointed to present a Fee Bill at the next meeting.

On motion, Dr. O. P. Allen was appointed to write an essay on Homœopathy, to be read at the next meeting.

The Secretary was instructed to forward the proceedings of this meeting to the *Chicago Medical Journal* and our county papers for publication.

On motion, the society adjourned to meet in Aledo on the last Wednesday of November next.

J. A. MAURY, *President.*

W. R. FOX, *Secretary.*

EDITORIAL.

"THE SENIOR EDITOR OF THE CHICAGO MEDICAL JOURNAL FEELING BADLY!"

Under this *dignified caption*, the September number of the *Peninsular and Independent* contains three pages of editorial matter perfectly characteristic of the source from which they emanate. There are some men, so accustomed to act from motives purely personal and selfish, that, whenever they consider the doings of others, they almost instinctively lose sight of the acts themselves in an attempt to divine the motives which may have dictated them. Such men often see enemies where none exist, and are exceedingly valiant in *defending* institutions that have been assailed by no one.

In a former number of this journal we made some comments on the proceedings of the last annual meeting of the American Medical Association, in which we frankly stated that the business of the meeting was often embarrassed by the want of familiarity with parliamentary rules on the part of the President; that too much time was devoted to ethics; and that

several special committees were treated unjustly by being entirely omitted from the proceedings. These statements, made solely for the purpose of advancing the permanent interests of the Association, by inducing more carefulness to avoid similar errors in future, Dr. Palmer gravely construes into an *attack* upon that organization. And "lest the *disparaging statements should wound the reputation of the Association,*" he straightway takes upon himself the task of defence. But how does he perform it? Does he show one of our statements to be untrue or unjust? Oh no! nothing of the kind; but in place thereof, he gives the following *lucid* "explanation of our course." He says:

"Some of the reasons why the editor of the *Chicago Journal* received so unfavorable an impression of the meeting at Washington may be understood when it is stated, that, in the early years of the Association—in its infancy—*the which very bad things have convinced the editor that his reputed father assumed a large degree of parental* control over its affairs, but that since a more mature age has been attained by the offspring, and its independence of that attempted control has been manifested, the undutiful child is denounced, and the parental rod applied."

Now, reader, if you do not clearly comprehend the meaning of this paragraph, please read it again; and if you should still be somewhat in doubt, especially concerning the "reputed father," please ask the senior editor of the *Peninsular and Independant*, to give a *syntaxical* explanation of it. But he proceeds:

"Not to specify any possible high expectations of our neighbor unrealized at the Washington meeting, it cannot be improper to state what is intimated in the article under notice, that the author went to the meeting with a paper in his pocket—the continuance of his report on lactation, and its relations to pregnancy, etc.—and that, because he did not get an opportunity to read it, as he had read before in *full* the other instalments—or, at least, because the proceedings of the meeting were not conducted according to his fancy—he carried the paper away with him, and broke up the published series of his observations, not allowing this continuation to be published in the Transactions!"

Such is the substance, and very nearly the sum total, of what the editor of the *Peninsular and Independant* has "felt constrained to say in explanation" of our course, "lest our

disparaging statements should wound the reputation of the Association," etc. The nonsense (we had like to have said *twaddle*) about the "reputed father"—"the offspring"—"the parental control"—"the possible high expectations," etc., is of a character well fitted for the columns of some small partisan country newspaper, but wholly unworthy the columns of a magazine devoted to the cultivation of a noble profession.

The only thing mentioned that has any relation to the doings of the Association, is the reading of a report which we had prepared in the performance of our duty as a special committee.

It will be seen by reference to his language, as quoted above, that the editor of the *Peninsular* fairly conveys to his readers the idea that we sought an opportunity to read our report *in full;* and because we could not do it, took offence and kept the paper. A statement so utterly devoid of truth should cause a blush to mantle the cheek, even of the senior editor of the *Peninsular and Independent.* The facts were precisely as follows: When about two-thirds of the special committees had been called and their reports disposed of, our report was duly announced by the President as next in order. We immediately rose to respond, holding half a sheet of letter paper in our hand. While thus on the floor, but before we had read a word, some member of the Association moved that all the remaining special committees be called in order, their reports read by their titles only, and referred to the committee of publication. We stated that the reading of the abstract we had prepared would not occupy more than from five to eight minutes of time. But the vote on the motion was taken immediately and carried. The President, however, instead of proceeding to call the remaining committees and have the titles to their reports read, entertained other business, and thus left four or five special committees without so much as a question whether they had prepared reports or not. Perhaps Dr. Palmer will regard this specimen of the mode of doing business as sufficient proof that the President was familiar with parliamentary rules. Be this as it may, however, it resulted in an entire omission of several special committees from the official records of the annual meeting of the Association. In our former article we complained of this as an act of injustice

to the committees, and directly calculated to injure the Association by discouraging investigations on the part of committees. It may be that the editor of the *Peninsular Journal* is sufficiently anxious to see his name in print, to induce him to send a report to the committee of publication, when not so much as its title had been read to the Association, and not the slightest mention made of it in the official record of proceedings. If so, we have only to say that we neither partake of his anxiety nor approve of his ideas of propriety. In our former notice of the Washington meeting, we made no attack upon the Association or any of its members. As a true friend, ever anxious to insure its permanent prosperity, we pointed out such faults as we thought important, for no other purpose than to aid in preventing their repetition. But has it come to this, that every man who does not play the *courtier* and eulogize every item of the Association's proceedings and even the *manner* of conducting its business, must be published to the world as its enemy?

The able senior editor of the *North-American Medico-Chirurgical Review* ventures to criticise a paragraph in the late President's annual address, and straightway the *Nashville Journal* pours out upon him half a dozen columns of personal abuse. We venture to assert that devoting one-half of the annual meeting to mere ethics, and omitting all notice of several special committees, is not calculated to advance the permanent interests of the association; and the editor of the *Peninsular and Independent* proclaims that we have attacked that organization, racks his brains for some *possible personal* grief, and calls upon the medical public to apply to us "the contradiction and *rebuke*." We were about to ask who are the senior editors of the *Nashville* and *Peninsular* journals, and who constituted them *defenders* of the American Association? But we will not follow their example by so much as an allusion to personal motives or personal history. We are content to leave them to the judgment of an intelligent profession.

ILLINOIS STATE MEDICAL SOCIETY.

Some members of the State Medical Society have recently made inquiries in reference to the *Transactions*. For the in-

formation of all such, we would state that so few of the members have paid the annual assessment, as to leave only about fifteen dollars in the treasury after paying the arrearages of last year. Of course, the Secretary cannot publish the *Transactions* with such a state of the treasury, unless he advances the printer's pay out of his own pocket. Will those members who are delinquent take the hint? Dr. J. W. Freer, of Chicago, is the Treasurer, and the amount of the annual assessment is *three* dollars.

RUSH MEDICAL COLLEGE.

The dissecting rooms in this institution were opened, and daily clinical instruction commenced in the Mercy Hospital, on the first Tuesday in October. Clinics are also given on two mornings in the week at the Marine Hospital, under the charge of Prof. Brainard. Two lectures are also given daily in the College Hall, one on Diseases of the Unimpregnated Uterus by Prof. Byford, and the other on the Topography and Climate of the United States, and their relations to the prevalence of diseases, by Prof. Davis. An unusually large number of students are in attendance, and indications are favorable for a large class during the regular winter term.

SHELBY MEDICAL COLLEGE.

We have received the announcement of a new institution with the above title in Nashville, Tennessee. Judging from the statements made by the Dean, the faculty have every facility for instruction. Its faculty consists of

John Frederick May, M.D., Prof. of Surgery, etc.
E. B. Haskins, M.D., Prof. of Theory and Practice.
John P. Ford, M.D., Prof. of Obstetrics, etc.
Thos. L. Maddin, M.D., Prof. of Anatomy.
John H. Callender, M.D., Prof. of Materia Medica, etc.
Richard O. Curry, M.D., Prof. of Chemistry, etc.
Daniel F. Wright, M.D., Prof. of Physiology and Pathology.
H. M. Compton, M.D., Demonstrator of Anatomy.

RESIGNATIONS.

Prof. S. G. Armor has resigned the Chair of Pathology and Clinical Medicine in the Missouri Medical College. Dr. McMartin, of St. Louis, takes his place.

Prof. Merrill has resigned the Chair of Theory and Practice of Medicine in Memphis Medical College, and John Pitman, M.D., has been elected to fill his place. Prof. Wright has resigned the Chair of Physiology and Pathological Anatomy in the same institution, and W. J. Tuck, M.D., has been elected to the place.

OBITUARY.

Dr. L. G. Robinson, of Detroit, one of the editors of the *Independent*, an able writer, an accomplished scholar and able practitioner in the profession, died May 7th, at Detroit.

The world-renowned Prof. Robert Hare, of Philadelphia, died May 16th, 1858, in the seventy-fifth year of his age.

MEDICAL CHARITIES.

During the present year several charitable medical institutions have been opened in this city.

A Dispensary has been maintained at the Medical College in the North Division, under the charge of Drs. Powell and Durham; and another at the corner of Clinton and Randolph sts. in the West Division, under the care of Drs. Wardner, Hollister and Andrews.

The Chicago Charitable Eye and Ear Infirmary has also been some months in operation, under the direction of the following officers and attendants:

Trustees.

W. L. Newberry, *President.*	P. Carpenter.
Dr. C. V. Dyer, } *Vice Pres's.*	J. H. Kinzie.
L. Haven, }	E. B. McCagg.
S. Stone, *Sec. and Treasurer.*	F. Moseley.
Rev. W. Barry.	Rev. Dr. N. L. Rice.
W. H. Brown.	M. Skinner.

Consulting Surgeons.

Prof. D. Brainard, M.D. Prof. J. W. Freer, M.D.

Visiting Surgeons.

Dr. E. L. Holmes. Dr. F. B. Norcom. Dr. H. Parker.

All the medical men connected with these institutions are in good standing in the profession, and entitled to the confidence of the community.

MEDICAL JOURNAL CHANGES.

The Medical and Surgical Reporter, of Philadelphia, has been changed from the form of a monthly to that of a weekly sheet. It remains under the efficient editorial management of Drs. Butler and Atkinson.

The Nashville Medical Record has been commenced as the successor of the *Memphis Medical Reporter* and the *Southern Journal of Medical and Physical Sciences.* It is edited by Drs. Wright and Curry, professors in the new Shelby Medical College, and issued monthly.

NEW YORK QUARANTINE ESTABLISHMENT.

The Quarantine buildings on Staten Island, connected with the port of New York, were deliberately burned to the ground, on the nights of the 1st and 2d of September, by the inhabitants of the neighborhood, acting in the capacity of a mob. The patients, amounting to a large number, were first taken out into the open air and left without a shelter. Fear of the spread of yellow fever was the alleged cause; but such an act of vandalism is a disgrace to our age and nation, which admits of neither palliation nor excuse.

NUMBER OF MEDICAL COLLEGES IN THE UNITED STATES.

According to the *American Medical Gazette*, there are now forty-one medical colleges in our country. They are distributed as follows: In New York, six; Pennsylvania, four; Georgia, four; Ohio, three; Tennessee, three; Virginia, two; Kentucky, two; Missouri, two; Louisiana, two; Massachusetts, two; Vermont, three; Maine, one; New Hampshire, one; Connecticut, one; Iowa, one; Michigan, one; Illinois, one; Maryland, one; South Carolina, one.

By the process of percolation, carefully conducted, the crude material is completely exhausted of its medicinal virtues, and these, by subsequent evaporation, at a low temperature, are retained in their full original activity, and in a form highly concentrated, and exceedingly convenient for prescription.

We would respectfully invite physicians to make trial of the above, feeling confident that they will be found entirely reliable.

To those who prefer Tilden & Co.'s Extracts, we would say that we keep the usual assortment of their Solid and Fluid Extracts, and offer them at their prices. SARGENT & ILSLEY, Druggists, 140 Lake-street, Chicago.

Extractum	Aconiti Fluidum,	One fluid drachm is equal to	½	a drachm of the crude material
"	Asclepiadis Tuberosæ,	"	"	"
"	Buchu,	"	"	"
"	Belladonnæ,	"	"	"
"	Cinchonæ (Calisaya),	"	"	"
"	Colombæ,	"	"	"
"	Conii,	"	"	"
"	Cimicifugæ,	"	"	"
"	Cubebæ, U. S.	"	ounce	"
"	Ergotæ	"	2 scruples	"
"	Gallæ,	"	½ a drachm	"
"	Gentianæ,	"	1 "	"
"	Hyoscyami,	"	½ "	"
"	Lobeliæ,	"	"	"
"	Opii,	"	about 5 grains	"
"	Pareiræ Bravæ	"	½ a drachm	"
"	Piperis Nig., U. S.,	"	2 ounces	"
"	Pruni Virg,	"	½ a drachm	"
"	Rhei, U. S.,	"	1 "	"
"	" et Sennæ,	"	45 grs. Senna 15 grs. Rhub.	"
"	Sanguinariæ	"	½ a drachm	"
"	Serpentariæ,	"	"	"
"	Scutellariæ,	"	"	"
"	Sarsaparillæ, U. S.,	"	1 "	"
"	Sennæ, U. S.,	"	"	"
"	" et Spigeliæ, U. S.,	"	30 grs. Pink-root, 15 grs. Senna,	"
"	Stillingiæ,	"	½ a drachm	"
"	Taraxaci,	"	1 "	"
"	Valerianæ, U.S.	"	½ "	"

Sargent & Ilsley's Solution of Chloride of Zinc,

For Purifying Sick Chambers, Sinks, Chamber Vessels, Vaults, Cellars, and for preserving Corpses, Preventing Moths, Exterminating Bugs, &c.

To obtain a substance harmless in itself, and free from smell, but possessed of the property of destroying all other smells, particularly such as are offensive or injurious to health, has long occupied the attention of scientific men. It has been found that Chloride of Zinc possesses this power in a high degree, and is also safe, economical and convenient.

It has received the sanction of the highest medical authority, and been very extensively introduced into the hospitals and public institutions of Europe and this country.

Our solution is of uniform strength, containing 35 per cent. of the dry chloride, and for most purposes should be diluted with twenty times its bulk of water. It is the cheapest, most effectual and convenient disinfectant known.

Its application is perfectly safe, both to persons and property; it is also free from the noxious and disagreeable odor of the chloride of lime, and the directions pertaining to the various disinfectants in common use. Full directions accompany each bottle.

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The high estimation in which these Medicines are held by those Practitioners who have tested their virtues, and their rapidly increasing popularity, induce us to recommend them to the Medical Faculty generally, with the assurance that a thorough trial will result advantageously.

We are prepared to offer the manufacturers' best terms to the trade, and being at all times well supplied, respectfully solicit orders.

We subjoin a List of these Preparations, to which additions will be made from time to time.

Powders.	*Obtained from*	*per oz.*
Ampelopsin,	Ampelopsis Quinque,	$1 50
Alnuin,	Alnus Serrulata,	1 00
Apocynin,	Apocynum Cannabinum,	2 00
Asclepin,	Asclepias Tuberosa,	1 50
Baptisin,	Baptisia Tinctoria,	1 00
Caulophyllin,	Caulophyllum Thalic.,	0 75
Cerasein,	Cerasus Virginiana,	1 50
Chelonin,	Chelone Glabra,	1 25
Cornin,	Cornus Florida,	1 00
Corydalin,	Corydalis Formosa,	4 00
Cypripedin,	Cypripedium Pubescens,	1 00
Digitalin,	Digitalis Purpurea,	1 50
Euonymin,	Euonymus Americanus,	1 50
Euphorbin,	Euphorbia Corolata,	1 50
Eupatorin, (Perfo.)	Eupatorium Perfolia,	1 00
Eupatorin, (Purpu.)	Eupatorium Purpureum,	1 50
Gelsemin,	Gelseminum Semper.,	2 00
Geranin,	Geranium Maculatum,	0 62
Helonin,	Helonias Dioica,	1 75
Hydrastin,	Hydrastis Canadensis,	1 25
Hyosciamin,	Hyosciamus Niger,	2 50
Irisin,	Iris Versicolor,	1 00
Jalapin,	Ipomœa Jalapa,	1 00
Juglandin,	Juglans Cinerea,	0 75
Leptandrin,	Leptandria Virginica,	0 75
Lupulin,	Humulus Lupulus,	1 00
Macrotin,	Macrotys Racemosa,	0 62
Menispermin,	Menispermum Canad.,	1 00
Myricin,	Myrica Cerifera,	0 62
Phytolacin,	Phytolacca Decandra,	1 00
Podophyllin,	Podophyllum Peltatum,	0 75
Populin,	Populus Tremuloides,	0 50
Prunin,	Prunus Virginiana,	0 75
Rhusin,	Rhus Glabrum,	1 00

Powders.	*Obtained from*	*per oz.*
Rumin,	Rumex Crispus,	$0 75
Sanguinarin,	Sanguinaria Canadensis	0 75
Scutellarin,	Scutellaria Lateriflora,	1 50
Senecin,	Senecio Gracilis,	1 50
Stillingin,	Stillingia Sylvatica,	1 25
Strychnin,	Strychnos Nux Vomica,	3 00
Trillin,	Trillium Pendulum,	1 00
Veratrin,	Veratrum Viride,	1 50
Viburin,	Viburnum Oxycoccus,	1 50

Concentrated Tinctures.	*per oz.*
Con. Tinc. Apocynum Andro.	$1 00
" " Chelone Glab.	0 50
" " Digitalis Purp.	0 50
" " Euonymus Amer.	0 50
" " Eupatorium Purpu.	0 75
" " Gossypium Herb.	1 00
" " Rhus Glab.	0 50
" " Scutelloria Later.	0 50
" " Senecio Gracilis.	0 50
" " Strychnos Nux Vomica.	1 00
" " Xanthoxylum Frax.	0 62
Con. Comp. Stillingia Alterative,	1 00
Xanthoxylin Pills,	0 50
	per bot.
Con. Tinc. Gelseminum Semp. 6 oz. bot.	1 00
" " Veratrum Viride, 4 oz. bot.	0 75
Wine Tinc. Lobelia Inf., 6 oz. bot.	0 50

Oils.	*per oz.*
Oil Lobelia,	1 50
" of Capsicum,	0 75
" " Erigeron,	0 50
" " Populous,	0 50
" " Stillingia,	1 00
" " Zanthoxylum,	0 75
Oleo-Resin of Lobelia,	0 75

Pocket Medicine Cases, filled with Concentrated Medicines.

No. 1.	20 vials,	.....	$5 00
" 2.	24 "	.....	6 00
" 3.	28 "	.....	7 00

An extra charge of ten cents per oz. will be made for medicines put up in half oz. vials.

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